

ROUTLEDGE WORLD ARCHAEOLOGY

# PREHISTORIC BRITAIN

TIMOTHY DARVILL

2ND EDITION



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# PREHISTORIC BRITAIN

## *Second Edition*

Britain has been inhabited by humans for over half a million years, during which time there were a great many changes in lifestyles and in the surrounding landscape. This book, now in its second edition, examines the development of human societies in Britain from earliest times to the Roman conquest of AD 43, as revealed by archaeological evidence. Special attention is given to six themes which are traced through prehistory: subsistence, technology, ritual, trade, society, and population.

*Prehistoric Britain* begins by introducing the background to prehistoric studies in Britain, presenting it in terms of the development of interest in the subject and the changes wrought by new techniques such as radiocarbon dating, and new theories, such as the emphasis on social archaeology. The central sections trace the development of society from the hunter-gatherer groups of the last Ice Age, through the adoption of farming, the introduction of metalworking, and on to the rise of highly organized societies living on the fringes of the mighty Roman Empire in the 1st century AD. Throughout, emphasis is given to documenting and explaining changes within these prehistoric communities, and to exploring the regional variations found in Britain. In this way the wealth of evidence that can be seen in the countryside and in our museums is placed firmly in its proper context. It concludes with a review of the effects of prehistoric communities on life today.

With over 120 illustrations, this is a unique review of Britain's ancient past as revealed by modern archaeology. The revisions and updates to *Prehistoric Britain* ensure that this will continue to be the most comprehensive and authoritative account of British prehistory for those students and interested readers studying the subject.

**Timothy Darvill** is Professor of Archaeology and Director of the Centre for Archaeology, Anthropology and Heritage in the School of Conservation Sciences, Bournemouth University. His research interests focus on the prehistory of northwest Europe and he has excavated at Stonehenge, Wiltshire, as well as in other parts of England, Wales, the Isle of Man, Greece, and Russia. Among his many publications are *The Concise Oxford Dictionary of Archaeology* (2008) and *Stonehenge: The Biography of a Landscape* (2006).

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# PREHISTORIC BRITAIN

Second Edition

*Timothy Darvill*

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*For Michael and Winnie Darvill,  
to help explain some of the ancient monuments  
they have seen on their holidays!*

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# ABBREVIATIONS

|       |                                                                                 |
|-------|---------------------------------------------------------------------------------|
| AD    | <i>Anno Domini</i> . Solar years in the Christian era in the Gregorian Calendar |
| AHOB  | Ancient Human Occupation of Britain Project                                     |
| AMH   | Anatomically Modern Humans                                                      |
| BC    | Before Christ. Solar years in the pre-Christian era in the Gregorian Calendar   |
| BP    | Before Present (conventionally taken as before AD 1950)                         |
| DNA   | Deoxyribonucleic Acid                                                           |
| DPDR  | Decorated Post Deverel-Rimbury                                                  |
| DR    | Deverel-Rimbury                                                                 |
| GIS   | Geographical Information System                                                 |
| GPR   | Ground Penetrating Radar                                                        |
| GPS   | Global Positioning System                                                       |
| LBK   | <i>Linearbandkeramic</i>                                                        |
| LiDAR | Light Detecting and Ranging                                                     |
| MIS   | Marine Isotope Stage                                                            |
| mtDNA | Mitochondrial Deoxyribonucleic Acid                                             |
| OD    | Ordnance Datum                                                                  |
| OIS   | Oxygen Isotope Stage                                                            |
| PDR   | Post Deverel-Rimbury                                                            |
| PPDR  | Plain Post Deverel-Rimbury                                                      |
| RSC   | Recumbent Stone Circle                                                          |
| TRB   | <i>Trichterbecker Culture</i>                                                   |



# PREFACE AND ACKNOWLEDGEMENTS

Since the publication in 1987 of the first edition of *Prehistoric Britain* many new discoveries have been made, a wealth of original research undertaken, and fresh interpretations of existing finds developed. As a result, our understanding of prehistoric times in Britain has changed considerably. One driver of this change is an increased concern for the environmental impact of urban expansion, civil engineering works, and other intensive activities in our landscapes, townscape, and seascapes. Chance discoveries arising from property development or agricultural operations have long contributed to the accumulating database of prehistoric sites and finds, but in 1985 the European Union published regulations on the assessment and consequential mitigation of environmental impacts that were first implemented through UK legislation in 1988 (revised in 1997). It was an approach that was extended and strengthened in 1990 when the UK government published guidance on archaeology in planning (popularly known as PPG16 in England with parallel statements for Scotland and Wales). For the first time this integrated archaeological concerns with the enormous power of the long-established Town and Country Planning system. At its heart was a concern for preserving archaeological deposits; in practical terms, however, this meant introducing a system whereby prospective development sites were evaluated for their archaeological potential as part of the design process, and where preservation was not possible then impacts were mitigated through excavation and recording as a development cost. Between 1990 and the end of 2007 more than 19,000 field-evaluations took place in England alone, of which about 20 per cent yielded evidence of prehistoric activity. Over 90 per cent of all archaeological interventions were funded through commercial operations with the inevitable result that while most major pieces of work find their way to publication as reports in monographs or journals there is a lot of so-called 'grey literature' created along the way to support the processes of assessment, evaluation, determination, and mitigation. There is also an increasing concern that the parallel systems of legislation covering ancient monuments, spatial planning, and environmental impact assessment have become unwieldy, and that the time is now right to simplify the system.

Also contributory to the expanding database of prehistoric remains in England Wales was the reform in 1996 of the law relating to Treasure Trove, and the introduction in 1997 of the Portable Antiquities Scheme to register stray finds made through metal-detecting and casual discovery. Both changes have been a great success. More than 52 declarations of Treasure relating to prehistoric material were made in 2006, and during the same year some 16,000 prehistoric items were registered as portable antiquities. Like the results of developer-funded excavations, this new data serves not only to enrich our record of early times but also to provide greater resolution to our understanding of people's lives in time and space.

The quickening pace of discovery has tended to make prehistoric studies increasingly specialized with attention directed to environmental studies, technology, settlement, trade, identity, or perhaps one particular period. At the same time, both the natural sciences and the social sciences have influenced the direction of archaeological research, and played a formative role in refining and extending archaeological theory. This is, of course, only natural in a developing and expanding discipline, but for the non-specialist the tangle of publications makes it easy to lose track of what is going on. It was against such a background that this book has been updated to provide a broad overview of British prehistory accessible to a wide inquiring public as well as to sixth-form, extra-mural, and undergraduate students.

Chronologically, this book is concerned with the period between the first human occupation of Britain through to the Roman Conquest. Since the writings of Daniel Wilson in the mid nineteenth century AD this period has been referred to in the English language as 'prehistory' – literally, the time before history – which also finds expression in French as *préhistoire*, in German as *prähistorisch*, in Spanish as *prehistórico*, in Swedish as *förhistorisk*, and in Danish and Norwegian as *forhistorisk*. As such the idea of prehistory was developed within the framework of western positivist post-enlightenment thinking in order to provide a convenient label for a period of the collective European past that had previously been understood with reference to religious orthodoxies. But it is important to recognize that prehistory was not lacking in history just because there are no preserved written accounts. Prehistoric communities had their own creation myths, traditions, and oral histories that explained and documented their perceived origins, development, relationships, and place in the cosmos.

For much of the late nineteenth and twentieth centuries AD European prehistory was configured as a series of successive technologically defined ages variously subdivided into periods, phases, and sub-phases through the study of changing styles in material culture (tools, weapons, pottery, brooches, etc.) and the imposition of an evolutionary scheme whereby the crudest things were the oldest and the more sophisticated, more elaborate, and technologically advanced pieces somewhat later. Thus in 1836 Christian Thomsen, the first curator of the National Museum in Copenhagen, introduced the terms *stenalder*, *bronzealder*, and *jernalder* that in 1848 were translated by Lord Ellesmere into English as Stone Age, Bronze Age, and Iron Age. Further refinements were made to this Three Age System by John Lubbock in 1865 by splitting the Stone Age into a Palaeolithic Age and a Neolithic Age. A transitional Mesolithic Age sandwiched between the two was proposed in 1866 by Hodder Westropp, but rarely used until Myles Burkitt popularized it in the 1920s. Along with many refinements and subdivisions these periods have served well over the decades but lack the precision now available through scientific dating.

Here therefore, as in the first edition, I have eschewed the relativist chronology of the Three Age System in favour of an absolute chronology based on the backward projection of the modern western calendar. In this solar years are aggregated into decades, centuries, and millennia and arranged on a biaxial linear time-reckoning scheme conventionally denominated as years Before Christ (BC) and *Anno Domini* (AD), or alternatively as years Before the Common Era (BCE) and years within the Common Era (CE). Although convenient and readily understandable now, we can be certain that prehistoric people did not live their lives with reference to this calendar because the cyclical year of 365 solar days with a quadrennial extra day was established by Julius Caesar, introduced in the Old World during Roman times, and modified by Pope Gregory XIII in AD 1582. The infinitely scalable linear time-reckoning system based on years BC and AD was established in Britain by the Venerable Bede in AD 728, and most recently revised by act of Parliament in AD 1751 when the Gregorian Calendar was adopted. Back in prehistory communities undoubtedly had their own systems for time-indication, probably based on the movements of celestial bodies, and in later prehistory probably had time-reckoning systems in which days and months were blocked together, identified, and labelled. As discussed in Chapter 9, it is possible that shades of these systems remain visible in our modern cycle of festivals and celebrations, but exactly how they worked we do not know.

Radiocarbon dating of preserved organic materials, and to a lesser extent dendrochronological dating using tree rings in preserved timber, provide the basis by which things, structures, deposits, and events are placed within chronological frameworks. Something of how radiocarbon dating works is explained in Chapter 1, but it is important to recognize that dating the ancient past is far from straightforward. One problem is the relationship between the death of the material being analysed (usually charcoal or bone) and the event or activity being dated. How long was the material in circulation? How quickly did it become incorporated into archaeological deposits? And did it move in the ground after its initial deposition? Various tests, physical and statistical, can be applied to help address these questions which become increasingly important as the level of precision rises. A second issue is how raw determinations are converted into calendar years, and how such dates are expressed. Here, specific single radiocarbon determinations are cited as a date-range (e.g. 2450–2200 BC) in solar years based on a calibration of the original age determination at two standard deviations (broadly the 95 per cent confidence limits). The laboratory number, original uncalibrated age determination in years BP (Before Present, conventionally taken as AD 1950), and error estimates expressed as a standard deviation are also given. All radiocarbon determinations were calibrated using OxCal version 4.0 with atmospheric data. Where multiple determinations have been combined, or used to create dating models, then an age range is cited without supporting information about the determinations used. Where a general statement about the age of something is made on the basis of its typology, stratigraphy, or comparisons with securely dated examples then a single rounded date is given (e.g. 2800 BC) and should be treated as a best approximation.

Other related disciplines such as geology and palynology also have schemes to represent time-depth in the evidential base of their particular interests. Radiocarbon dating has sometimes been applied to these materials as well, but cross-correlating the resultant schemes is far from easy. Table A relates the chapters of this book to geological subdivisions and conventional archaeological periods, while Table B provides a broad chronological framework for geological epochs and stages, biostratigraphic divisions, climatic phases, and pollen zones for the period since 13,000 BC.

# PREFACE AND ACKNOWLEDGEMENTS

**Table A.** Archaeological and geological periods in relation to approximate dates and the chapters of this book. [Sources: various]

| Date AD/BC | Geological sub-divisions |             | Archaeological periodization |                                                     | This Book |
|------------|--------------------------|-------------|------------------------------|-----------------------------------------------------|-----------|
|            | Period                   | Epoch       | Three Age System             | Expanded Three Age System with period sub-divisions |           |
| AD 1000    | QUATERNARY               | HOLOCENE    |                              | Medieval<br>Anglo-Saxon<br>Roman                    |           |
| AD1/1BC    |                          |             | IRON AGE                     | Late<br>Iron Age                                    | Chapter 8 |
| 1000       |                          |             |                              | Middle<br>Early                                     | Chapter 7 |
| 2000       |                          |             | BRONZE AGE                   | Late<br>Bronze Age                                  | Chapter 6 |
| 3000       |                          |             |                              | Middle<br>Early                                     |           |
| 4000       |                          |             |                              | Late/<br>Chalcolithic                               | Chapter 5 |
| 5000       |                          |             |                              | Middle                                              | Chapter 4 |
| 6000       |                          |             |                              | Early                                               |           |
| 7000       |                          |             |                              |                                                     |           |
| 8000       |                          |             |                              |                                                     |           |
| 9,000      |                          | PLEISTOCENE | STONE AGE                    | Late                                                | Chapter 3 |
| 11,000     |                          |             |                              | Mesolithic                                          |           |
| 15,000     |                          |             |                              | Early                                               |           |
| 30,000     |                          |             |                              |                                                     |           |
| 50,000     |                          |             |                              | Final Upper<br>Palaeolithic                         | Chapter 2 |
| 100,000    |                          |             |                              | Later Upper<br>Palaeolithic                         |           |
| 250,000    |                          |             |                              | Earlier Upper<br>Palaeolithic                       |           |
| 500,000    |                          |             |                              | Middle<br>Palaeolithic                              |           |
| 1,000,000  |                          |             |                              | Lower<br>Palaeolithic                               |           |

**Table B.** Comparison of schemes for the subdivision and periodization of the late glacial and post-glacial periods in Britain. Cold climatic phases are shown tinted. [Sources: various]

|              | Geological epoch | Geostratigraphic stage         | Biostratigraphic division/<br>climatic phase | Pollen Zone<br>(Godwin Zone) | Date<br>(calibrated radiocarbon age: BC)                            |
|--------------|------------------|--------------------------------|----------------------------------------------|------------------------------|---------------------------------------------------------------------|
| Post-glacial | Holocene         | Flandrian (interglacial stage) | Sub-Atlantic                                 | IX (VIII)                    | 1000 BC<br><br>3000 BC<br><br>4000 BC<br><br>6000 BC<br><br>8500 BC |
|              |                  |                                | Sub-Boreal                                   | VIII (VIIb)                  |                                                                     |
|              |                  |                                | Atlantic                                     | VII<br>(VIIb, VIC, VIIa)     |                                                                     |
|              |                  |                                | Boreal                                       | VI (VIa)                     |                                                                     |
|              |                  |                                |                                              | V                            |                                                                     |
|              |                  |                                | Pre-Boreal                                   | IV                           |                                                                     |
| Late glacial | Pleistocene      | Devensian (glacial stage)      | Younger Dryas<br>(Loch Lomond)               | III                          | 10,000 BC                                                           |
|              |                  |                                | Allerød Oscillation                          | II                           | 10,500 BC                                                           |
|              |                  |                                | Older Dryas<br>(Windermere)                  | Ic                           | 12,000 BC                                                           |
|              |                  |                                | Bølling Oscillation                          | Ib                           | 12,500 BC                                                           |
|              |                  |                                | Oldest Dryas<br>(Dimlington)                 | Ia                           | 13,000 BC                                                           |
|              |                  |                                |                                              |                              |                                                                     |

Geographically, attention is focused on the island now called Britain, also known as Great Britain, but referred to as *Albion* (Greek: Ἀλβίων) by Pliny the Elder in his *Natural History* written about AD 50. Britain is the largest land mass in an archipelago of over 1,000 habitable islands situated in the north-eastern Atlantic Ocean between 49 degrees and 61 degrees north, separated from continental Europe by the English Channel and the North Sea. Part of the United Kingdom, Britain comprises the Kingdoms of England and Scotland and the Principality of Wales. It covers approximately 209,330 square kilometres and has a maritime aspect with more than 18,000km of coast. Topographically, the western and northern part is dominated by mountainous uplands formed of ancient igneous and metamorphic rocks with Scafell Pike (Cumbria), Snowdon (Gwynedd), and Ben Nevis (Highland) rising to 978m, 1,085m, and 1,344m respectively. Eastern and southern areas are more low-lying with fertile soils over geologically more recent sedimentary bedrock. Also included are adjacent islands and island groups now administratively integral to England, Wales, and Scotland (e.g. Isles of Scilly, Isle of Wight, Isle of Anglesey, Western Isles, Orkney Islands, and Shetland Islands) and the Isle of Man which is a Crown Protectorate outwith the United Kingdom. Ireland is excluded from the present study as there are several easily accessible accounts of its prehistory.

Since 1974 the principal administrative areas in England, Scotland, and Wales have been reorganized several times and their boundaries changed. Currently, traditional shire counties subdivided into districts as two-tier authorities sit side by side with single-tier unitary authorities in a confusing mosaic. Sites referred to here are located with reference to the county or unitary authority in which they were situated in 2009. Where no additional administrative area name is given then the area has the same name as the site or place.

Naturally, everything that is new in archaeology is not necessarily any more correct than earlier work, and a high degree of selectivity has had to be exercised in choosing material and relating it to what is already known. By its very nature, research proceeds step by step off the back of earlier work, so that even studies which effectively lead down a *cul de sac* may make contributions to knowledge in the long term. However, the basis for selecting material for this book was its relevance to current understandings of the prehistoric past rather than what might be expected of a particular approach in future.

The layout adopted here is essentially a chronological narrative unfolded in Chapters 2 through to 8, starting with the earlier periods and working progressively towards Roman times. Throughout, emphasis is directed towards six interconnected themes: subsistence and economy; technology; ritual and ceremony; trade and exchange; society and identity; and population and community. However, the past does not make itself, and any understanding of prehistory relies heavily upon the practical business of recovering and analysing evidence both in the field and in the laboratory, and on the theoretical perspectives used to interpret what is found. Accordingly, Chapter 1 looks at the history of prehistoric archaeology in Britain, and outlines some of the methods and approaches most relevant to its study. It is also widely recognized that prehistory is a heritage that we still enjoy as part of today's historic environment and contributes to how we are in the world and how we perceive the future; these are matters examined in Chapter 9.

Practice and theory are inextricably linked, and unsurprisingly the discipline has also come to rely on an increasingly extensive specialized vocabulary describing entities or concepts relevant to its

field of interest. Some such jargon has been carried over from other disciplines; in other cases it has developed within prehistoric archaeology itself, often to avoid having to use words or phrases with strong overtones of twentieth-century westernized practice which may be wholly inappropriate in a prehistoric context. No apology is made for perpetuating use of some of these words, terms, and ideas, although a conscious effort has been made to minimize their use and to explain their meaning where appropriate in the text.

All the line drawings have been specially redrawn to a common set of conventions. Every effort has been made to ensure that they remain accurate and faithfully to the originals, although some detail has occasionally been omitted for clarity. Figures 10, 14, 16, 21, 25, 28, 35, 49, 65, 72, 75, 79, 82, 109, 110, 111, and 117 are based on drawings by Jane Timby carried over from the first edition; figures 3, 4, 5, 6B, 7, 8, 9, 18, 19, 20, 27, 30, 32, 33, 37, 39, 40, 42, 45, 47, 56, 57, 58, 59, 60, 63, 64, 68, 69, 70, 78, 83A, 84, 85, 91, 92, 94, 95, 97, 99, 100, 102, 106, 107, 112B, 114, 115, 116, 119, 125, and 126 were created by Vanessa Constant. Acknowledgement of source material, photographic credits, and the authorship of other figures is provided in the relevant caption.

The preparation of this book would not have been possible without the help of many individuals and organizations. First and foremost, thanks must go to the late Graham Webster and to Peter Kemmis Betty then of Batsford for their help in shaping a vague idea into what became the first edition of this book. Subsequently, Lalle Pursglove, Matthew Gibbons, and Richard Stoneman at Routledge have encouraged the revisions now presented in this second edition. Of the many people who answered queries, provided information, supplied photographs and illustrations, and commented on sections of the text special thanks go to Mick Aston, Mike Allen, Don Benson, Bob Bewley, Richard Bradley, Kenny Brophy, Bill Britnell, Dave Buckley, Stephen Burrow, Tony Clark, John Coles, Barry Cunliffe, Andrew David, Sue Davies, John Dent, Philip Dixon, Roger Doonan, Andrew Fleming, Andrew Foxon, Andrew Fitzpatrick, David Fraser, Mike Fulford, John Gale, Clive Gamble, Julie Gardiner, John Gowlett, Stephen Green, Colin Haselgrove, Frances Healy, John Hedges, Tom Higham, Richard Hingley, Neil Holbrook, Roger Jacobi, Margaret Jones, Kristian Kristiansen, George Lambrick, Fritz Lüth, Frances Lynch, Mark Maltby, Roger Mercer, Ken Murphy, Harold Mytum, Blaze O'Connor, Dave Parham, Mike Parker Pearson, Josh Pollard, Frances Pryor, Georgina Plowright, Ian Ralston, Miles Russell, Alan Saville, Danielle Schreve, Mick Sharp, Helen Smith, Yvette Staelens, Charles Thomas, Julian Thomas, Stephen Upex, Blaise Vyner, Clive Waddington, Geoffrey Wainwright, Martin Watts, Mark White, Eileen Wilkes, Willem Willems, and George Williams for all their help and support. I am also grateful to Bournemouth University for granting a period of research study leave during the 2009/10 academic year which allowed the completion of this revised edition.

Finally, congratulations to those who worked out the chapter titles in the first edition; commiserations to those readers and reviewers who simply didn't get what they were all about. For everyone, here's another set to try.

Timothy Darvill  
Bournemouth  
October 2009

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# 1

## RIGHT HERE, RIGHT NOW

### Prehistory in the present

In this age of high technology, mass communication, and a passion to record even the most mundane details of everyday life in as many different ways as possible, it is hard to imagine a time when there was no writing, no sophisticated technology, and communication largely depended on word of mouth. Yet such conditions prevailed for half a million years or so before the Roman conquest of Britain in AD 43, during which time some of the foundations for life and culture on the island of Britain as we know it today were laid down.

The absence of written records does not mean that nothing is known of these early societies in Britain. Quite the contrary. People interfered with the landscape during prehistory just as today, influencing its topography, building structures and monuments that were subsequently abandoned, and littering the countryside with discarded tools and piles of rubbish. In this way communities etched an enduring record of their actions into the landscape, and from what has survived over the millennia down to the present day something of these distant times can be reconstructed.

Almost every parish in Britain can boast the presence of prehistoric remains, and much can still be seen above ground level. On the rolling downs of southern England, for example, there are long barrows, tumuli, hillforts, and boundary earthworks that are as much a part of today's landscape as the villages, lanes, and sheep pastures of more recent times. By contrast, the rugged uplands of northern and western Britain bristle with the remains of roundhouses, camps, stone rings, standing stones, and brochs; in a few areas, notably parts of Cornwall, modern field walls still follow boundaries established over 3000 years ago. And for every site visible above ground there are perhaps ten times more hidden from view. Many superficially less promising landscapes are also rich in prehistoric remains. Flat peaty areas, such as the Somerset Levels or the Cambridgeshire Fens, preserve timber trackways and marshside settlements in their acid waterlogged soils, while the heavily cultivated arable lands along the

main river valleys of southern and eastern Britain preserve a variety of prehistoric remains just below the plough soil.

The wealth of evidence visible in the countryside is supplemented by an abundance of material stored and displayed in museums up and down the land, most of which has come to light over the past few centuries. Artefacts, of prehistoric date ranging from stone axes to iron swords, and from dug-out canoes to highly decorated Cinerary Urns, abound. Since 1997 the Portable Antiquities Scheme has been registering and recording artefacts found through metal detecting and chance discovery in England and Wales at a rate of about 50,000 per year, some 25 per cent of which are prehistoric in date.

Each of these monuments, sites, and objects is part of Britain's prehistoric heritage, a component of our historic environment. All contribute to the complicated and intriguing story of its past, of long-vanished human societies and the way they lived and changed through time. The story is one of good times and bad, of crisis, opportunity, and endless change. More particularly it is a story of communities wrestling a livelihood from their environment while promoting their identity among fellow groups, controlling their internal relationships, and above all ensuring their continuity.

This book is an attempt to outline that story up until the Roman conquest. It tries to look beyond the spectacular and the familiar in order to glimpse the people behind the evidence, at least as far as they can be seen from the archaeological evidence currently available. There are two basic aims: first, to set the evidence which can be seen in the countryside and in our museums into its wider context as a narrative account of prehistoric society; and second, to look at how and why those societies changed over time. Naturally, it is not possible to cover every region of Britain in the detail it deserves in a book of this length, and accordingly some generalization must be excused. But the shortcomings can be overcome by reference to the abundant literature relating to prehistoric Britain, and to this end a select bibliography follows the text.

## **BRITAIN BC**

Few people can fail to be interested in or inspired by the field monuments and the rich artefacts; the magnificence of Stonehenge in Wiltshire, or the splendour of the gold pectoral from Mold, Flintshire, now displayed in the British Museum. But when looking at sites in the open landscape, or fine exhibits in museum galleries, it is easy to forget that these are the remains of living, breathing, thinking people with their own ideas about the world and the cosmos, and their own peculiar aesthetic sense and value systems. Alongside the imposing sites and fine objects must be set the prosaic bric-a-brac of everyday life and the commonplace features of the landscape such as settlements, fields, and trackways. Moreover, to appreciate prehistoric sites and objects to the full it is necessary to know something of the environment in which they were set, the climate, and the animals and plants around at the time.

Although prehistoric people were physically not very different from us they would have seen the world through very different eyes, and had very different beliefs and values from those of today. Clearly it is impossible to read the minds of prehistoric people, but some insight into what they deemed important can be glimpsed from what they left behind and the way they obtained, treated, and deposited particular objects. Without writing, the perpetuation of memories, the transmission of knowledge, and understandings of traditions would have been communicated orally through song, poetry, story-telling, and the recital of myths and legends prompted perhaps by handling a special object or visiting a particular place.

Often, the prehistoric past is perceived as a relatively undifferentiated period, but again the reality was very different. Over the half million years or so before the Roman Conquest there were a great many changes – changes in ways of finding and producing food, changes in technology, changes in religious ritual, indeed changes in every aspect of life. Against such a background it would be quite wrong to elevate prehistory to the status of a ‘Golden Age’ when life was simple and close to nature. In fact, there is no reason to think that life in those distant times was not every bit as complex and, at times, as traumatic as today, perhaps more so.

Other misconceptions about events in prehistory abound in the popular imagination. Some of the more far-fetched include the idea that prehistoric people hunted dinosaurs, that Druidical ceremonies took place at Stonehenge, that the population was dwarf-like, and that ‘ley lines’ linked sites together by invisible linear force-fields well known to prehistoric communities but forgotten today. Such ideas originate in over-imaginative minds using inadequate evidence, and will, hopefully, be dispelled by what follows in later chapters. As a prelude to the detailed treatment of the evidence, it is perhaps helpful to look first at the development of interest in the subject, and second at the range of methods, theories, and techniques commonly used by prehistorians investigating the remote past.

## THE IDEA OF PREHISTORY

Today’s knowledge of prehistory is grounded in evidence accumulated over several centuries of study and investigation. The existence of pre-Roman inhabitants in these islands, ‘Ancient Britons’ as they were often called in the formative years of archaeological studies, was known before the sixteenth century AD because of references to them by classical writers such as Caesar and Tacitus. Although early antiquaries such as John Leland (c.1506–52) and William Camden (1561–1623) between them recorded many prehistoric sites in their accounts and publications they had no conception of the relative antiquity of the remains they described. It was the Wiltshireman John Aubrey (1626–97) who first really began to assign particular sites and monuments to the pre-Roman period. On the orders of Charles II, for example, he prepared a discourse on Stonehenge, and in the 1640s brought to the attention of the King the great circular henge monument at Avebury in north Wiltshire. Aubrey’s greatest work, *Monumenta Britannica*, contains a wealth of notes and drawings of prehistoric and later sites but languished

as a manuscript in the Bodleian Library in Oxford until 1982 when it was published for the first time some 285 years after the author's death.

The work of Leland, Camden, and Aubrey stimulated others, such as William Dugdale, Thomas Hobbington, Edward Lhwyd, and Robert Plot, to record the monuments in their own neighbourhoods. But all were constrained by the lack of a chronological framework within which to order the accumulating evidence, for the early history of humankind was immutably enshrined in the words of the Bible. In 1650 James Ussher, Archbishop of Armagh, calculated that on the basis of genealogies presented in the Bible the world began in 4004 BC. For several centuries, this date was widely accepted as authentic, which perhaps explains why little progress was made in advancing knowledge of ancient times during the late seventeenth and early eighteenth centuries. The idea of a time before history had, however, been born, and interest in it continued even though there was no word to describe it. From December 1707 a small band of men interested in the antiquities of Great Britain met regularly in the Bear Tavern on the Strand in London to hear about new discoveries. By 1717 their number had grown considerably and they formed the Society of Antiquaries of London, which in 1751 was granted a Royal Charter by King George II. A comparable organization, the Society of Antiquaries of Scotland, was established in Edinburgh in 1780.

## **DIGGING, RECORDING, AND THE THREE AGE SYSTEM**

By the mid eighteenth century simply recording monuments was occasionally supplemented by a more ambitious method of investigation: digging. William Stukeley (1687–1765) was perhaps the most eminent antiquary and field archaeologist of the period, investigating a number of barrows in Wessex, and undertaking the first detailed studies of Stonehenge and Avebury, which he published in 1740. Stukeley made a substantial contribution to knowledge, but the work of many antiquarians is more difficult to evaluate. The Revd Bryan Faussett (1720–76), for example, is known to have dug into hundreds of sites in south-east England, opening no fewer than 106 barrows around Gilton, Kent, over a period of only three years. Very few records of this work exist, and the evidence he excavated is therefore lost for all time. Others did much the same elsewhere.

The work of the eighteenth century set the scene for major changes in approach and understanding during the following century. Digging and recording (although not necessarily together!) continued through the work of Richard Colt Hoare (1758–1838), William Cunnington (1754–1810), General Pitt Rivers (1827–1900), and others. The Wessex chalklands of central southern England became the focus of much practical work, but the real advances came through conceptual changes that were happening elsewhere.

It was the intellectual climate of the early nineteenth century that really changed the face of prehistoric studies, and Peter Rowley-Conwy has shown that much of the impetus came from Scandinavia. Here the appointment in 1816 of Christian Jürgensen Thomsen (1788–1865) as Secretary to the Danish Royal Committee brought new systematic approaches to the study of

antiquities with the result that when sorting out the collections of the National Museum in Copenhagen he organized the ancient (*oldtid*) objects according to the materials used in their manufacture: stone, bronze, and iron. This, it turned out, represented an evolutionary scheme that was supported by archaeological observations, and in his book *Ledetraad til Nordisk Oldkyndighed*, published in 1836, he suggested the subdivision of prehistory into three successive stages, the *stenalder*, *bronzealder*, and *jernalder* – at a stroke providing both a classification and a rudimentary chronology.

Thomsen's book was translated into English by Lord Ellesmere (1800–57) and published in London in 1848 as *A Guide to Northern Antiquities*. The Three Age System as it was becoming known comprised the Stone Age, Bronze Age, and Iron Age. Thomsen's pupil Jens Jacob Worsaae (1821–85) was an enthusiastic exponent of the system and travelled widely in Europe between 1843 and 1848 promoting it. In Britain, Thomas Bateman (1821–61) was an early advocate, and he used it in his book *Vestiges of the Antiquities of Derbyshire* published in 1848. The museum of the Society of Antiquaries of Scotland in Edinburgh (now the Royal Museum of Scotland) became the first museum in the English-speaking world to arrange its collections according to the Three Age System. Daniel Wilson (1816–92) was the instigator of these developments, and in 1851 published *The Archaeology and Prehistoric Annals of Scotland*, which is widely recognized as the first book in English to use the word 'prehistory' in the sense of meaning the time before history. More than a decade later, in 1866, the British Museum applied the Three Age System to its collections.

The development of the Three Age System was only one of several events which profoundly changed the course of prehistoric studies in the late nineteenth century. Advances in the field of geology by Charles Lyell (1797–1875) and in the field of biology by Charles Darwin (1809–82) and others made their mark on prehistoric archaeology too. Together these works swept away traditional beliefs that humans and animals were absent from the earth when the rocks were formed and that humankind was a separate creation. The accumulated evidence of associations between early stone tools and the bones of extinct animals led to the proposition that prehistory was of very considerable duration. Using Darwin's evolutionary ideas, it was Thomas Huxley (1825–95) who showed in his book *Evidence as to Man's Place in Nature*, published in 1863, that humans evolved from predecessors in the animal kingdom. Fundamental to the practical study of prehistory was the development of the law of stratigraphy, which asserts that where deposits representing several phases of actions or events are superimposed the layer at the bottom will be the oldest and the one at the top the most recent. This principle underpins all modern excavation and the interpretation of archaeological deposits.

The effects of these developments caused something of a revolution in prehistoric studies and ushered in an avalanche of new work, some of it supporting the new ideas, some against them. The second half of the nineteenth century was a great period of excavation and discovery, and standing earthworks such as barrows and hillforts came in for much attention (1). Among the most memorable archaeologists of the time were Canon Greenwell, John Thurnam, Thomas Bateman, Charles Roach Smith, Arthur Evans, and General Pitt Rivers. Public works such as



**Figure 1** Engraving of an inhumation burial discovered in 1855 at Roundway, Wiltshire. [Reproduced from *Archaeologia* for 1871, by permission of the Society of Antiquaries of London]

railways and road schemes and the growth of towns brought to light much new evidence. Public interest grew as well, and it was at this time that many county archaeological societies came into being. In 1865 John Lubbock (later Lord Avebury, 1834–1913) published the first major synthesis of British prehistory entitled *Prehistoric Times* in which he subdivided the Stone Age into two parts, the earlier of which he named the ‘Palaeolithic’ and the later the ‘Neolithic’. This book subsequently went through seven editions, the last published in 1913 just after his death.

## PREHISTORY IN THE TWENTIETH CENTURY

By 1900 prehistory was firmly established as a discipline, a branch of archaeology, and many of the techniques and premises which dominated prehistoric studies through the twentieth century had been developed. The Three Age System provided the chronological framework, while detailed studies of artefacts and sites allowed individual pieces of evidence to be fitted onto the scheme. In addition to Lubbock’s two subdivisions of the Stone Age a third, the Mesolithic, was popularized by Myles Burkitt in the 1920s. But assigning dates to what had become the five periods of prehistory remained difficult. The best hope was seen in closely ordering the evidence into a relative sequence and wherever possible tying this to established chronologies for ancient Egypt and the classical world of Greece and Rome.

The periodic syntheses of prehistory published through the early twentieth century, notably those by Gordon Childe, Stuart Piggott, Jacquetta and Christopher Hawkes, and Grahame

Clark, trace the development of interpretation. Invasion and migration were invoked to explain what were seen as major discontinuities in the story of prehistory: the first arrival of farming, the appearance of Beaker pottery, the early use of iron, and so on. Gordon Childe developed the idea of recognizing distinct prehistoric ‘cultures’ through recurring patterns of material remains, and cultural units became the basis for many archaeological interpretations. O G S Crawford, the first archaeological officer with the Ordnance Survey, took these ideas further by adding the spatial dimension to the culture model so that by plotting out the distribution of specific types of object cultural areas could be defined. Sometimes cultures were credited with ethnic identity, even race, and ideas of ethnic replacement were hotly debated. In retrospect it is easy to see why these ideas developed when colonialism was a strong ideology in Britain and Marxism (which greatly influenced Gordon Childe among others) was expanding its intellectual and political influence.

Since the 1950s prehistoric studies have undergone further, revolutionary, changes which can again be seen in published overviews such as those by Colin Renfrew, Vincent Megaw and Derek Simpson, Richard Bradley, John Barrett, and Josh Pollard. Without exception these accounts are richer, more detailed, and better textured than earlier overviews. In part that is because there is simply more material to draw on, and in part because of advances in the way prehistoric archaeology is done. The building boom in the 1960s and 1970s brought to light a wealth of archaeological evidence on a scale previously unimagined and this continued through the 1980s and 1990s. Public interest has been raised through television programmes such as *Time Team*, *Meet the Ancestors*, and *Timewatch*, and press coverage of ongoing excavations. This in turn leads to better reporting of finds and grass-roots support for the archaeological process. Archaeology itself has become an established profession. There have been substantial increases in the number of practising archaeologists, both amateur and professional, in field archaeology, the academic sector, and in government agencies and local authorities. A survey carried out by the Institute for Archaeologists in 2007–8 shows more than 6,850 people make their living as archaeologists in the UK, and there are reckoned to be more than 200 commercial archaeological companies of which Wessex Archaeology, Cotswold Archaeology, Oxford Archaeology, Museum of London Archaeology Service, Pre-Construct Archaeology, AOC Archaeology, and Headland Archaeology are among the largest. Archaeological practice has also sharpened, principally in five spheres: recovery of the evidence; analysis; archaeological theory; dating; and environmental studies. Together these provide a solid basis upon which to reconstruct the prehistory of Britain, and accordingly deserve a little consideration.

## RECOVERY OF THE EVIDENCE

There is no direct link, such as historical documents, that allows us to step back into the prehistoric past in order to reconstruct early life in Britain. Everything we know about the prehistoric past must be derived from mute remains which, largely by chance, have survived the ravages of

time through many thousands of years. What we have is an archaeology which exists in the present representing a residue of what once was. Moreover, that residue is not large and is biased towards those types of evidence which survive most easily.

In the popular imagination excavation is often thought to be the main, if not the only, method prehistoric archaeologists use to obtain information about the societies they study. But while it is true to say that excavation is certainly important it is by no means the only technique available. Indeed, because excavation is expensive to undertake, and can only be entertained on a limited scale, some archaeologists argue it should be deployed far less frequently than it is so that resources can be channelled in other directions. Notwithstanding, all the techniques used by prehistoric archaeologists have one thing in common – they are ultimately designed to coax information about the past out of the ground. Five main techniques of investigation may briefly be considered, although in practice slight modifications have to be made to the basic principles of each to take account of soil conditions, terrain, and the type of site under investigation.

**Fieldsurvey** involves the systematic observation and recording of ancient features in the landscape through careful scrutiny of the ground surface – what are sometimes called the ‘humps and bumps’. It is the oldest and still the most commonly used technique in prehistoric archaeology. The information recorded is mostly spatial in the sense that it allows plots to be made of the landscape at different times. In some upland areas of Britain, for example Dartmoor, the Cheviots, and the Scottish Highlands, recent surveys have brought to light a bewildering amount of detail tantamount to complete relict landscapes. The use of laser-technology survey instruments and differential GPS mapping systems allows the rapid recording of large areas and the creation of digital terrain models and interpretative overlays.

**Aerial photography** as an archaeological technique was pioneered in the early inter-war years and involved remote sensing over wide areas using conventional manually operated cameras carried aloft by light aircraft. Careful use of low-angle sunlight and correct camera position can reveal even the slightest undulations in the ground surface and allow ancient features to be picked out. In the late summer differential crop growth over infilled ditches or pits can be clearly seen from high above and allows sites to be recognized and their plans drawn (2). A single flight can cover a large area, which makes this particular technique very cost effective, especially in areas difficult of access. Computer enhancement of photographs and computer plotting techniques allow accurate and rapid analysis of pictures. On the light gravel soils of the main river valleys aerial photography is especially effective in detecting cropmarks. The Thames Valley, the Avon Valley in Warwickshire, the Trent Valley, and the Ouse Valley have been intensively studied and literally thousands of sites and landscapes recorded. New developments in the application of airborne digital cameras, laser-scanning equipment (LiDAR), and multi-spectral imaging from satellites to archaeological reconnaissance promise a new era in this kind of research.

**Geophysical survey** focuses on systematically mapping variations in ground conditions and soil chemistry that reflect the nature and extent of past land use and the presence or absence of buried features such as ditches, bank, pits, hearths, walls, or surfaces. Most commonly used is magnetometry, which works by measuring minute variations in magnetic intensity within a

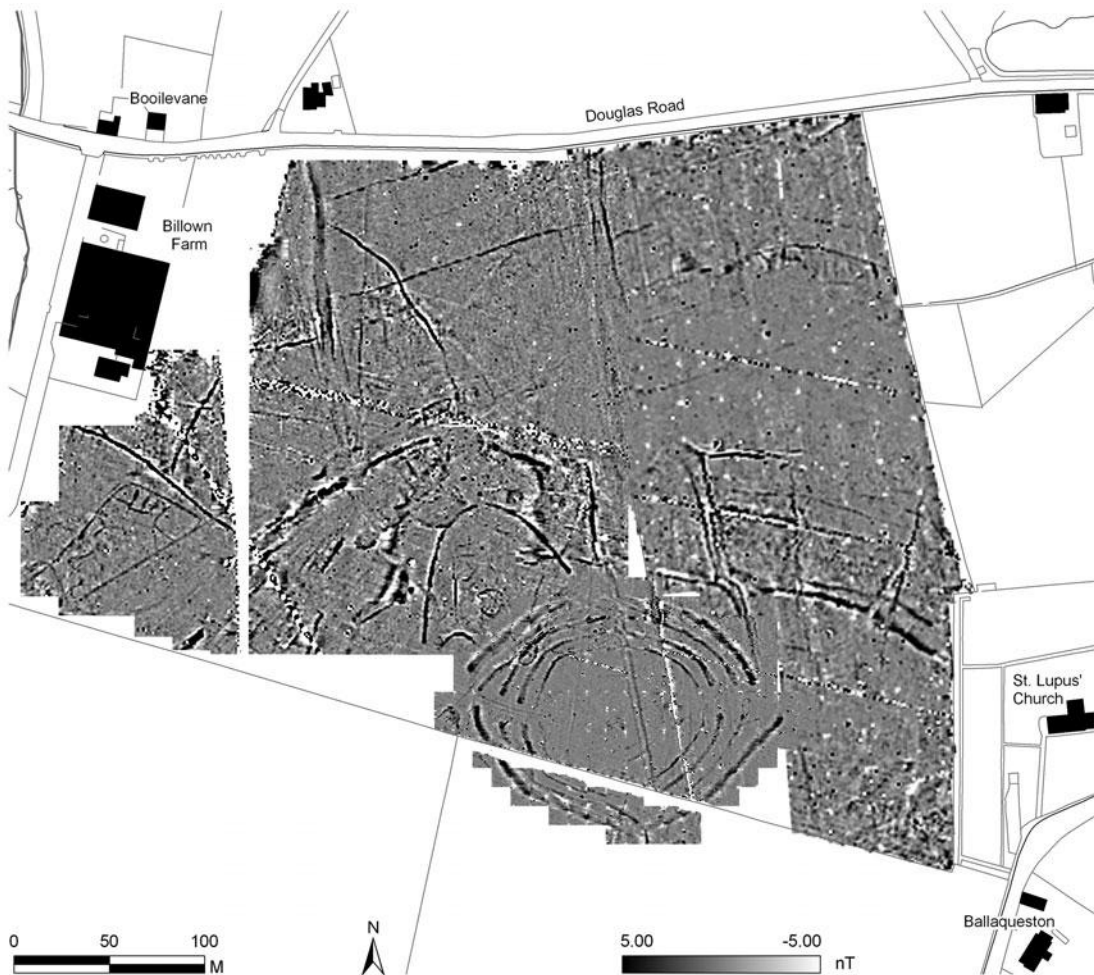




**Figure 2** Aerial view of cropmarks at Langford, Oxfordshire. The dark marks result from the plants drawing water and nutrients from sub-surface ditches and pits while the surrounding crop has ripened faster over undisturbed subsoil where root penetration is less. Enclosures, trackways, and circular buildings can be seen. [Photograph: Timothy Darvill; Pilot: Ron Lock. Copyright reserved]

defined search area (3). Other techniques include resistivity and earth conductivity, which record variations in the ability of soil to carry electric current; ground penetrating radar (GPR), which measures reflected electro-magnetic waves directed into the soil; magnetic susceptibility, which measures the ability of different soils to become magnetized; and soil chemistry, which examines, among other things, the distribution of phosphates, organic carbon, and heavy metals in soil profiles as indicators of past activity. All of these techniques have been greatly improved by the electronics revolution and the availability of microprocessors and computers for data capture, image analysis, and visualization.

**Fieldwalking/surface collection** involves systematically searching areas of disturbed ground in order to identify and record visible remains such as artefacts and building materials. Despite the great antiquity of prehistoric sites, most have only a thin soil cover and so buried features are frequently disturbed, for example by ploughing or field clearance. By carefully plotting the position of all the finds visible on the top of disturbed ground it is possible to work out the position and extent of buried sites. Such evidence can be used to build up pictures of activity patterns within a given area of landscape in much the same way as fieldsurvey does for topographic features. It is also useful to combine



**Figure 3** Magnetic survey plot of a multi-ditched enclosure and associated boundaries and fieldsystems at Skibrick Hill, Isle of Man. [Plot by Bronwen Russell and Vanessa Constant (Billown Neolithic Landscape Project). Copyright reserved]

the results of fieldsurvey, aerial photography, geophysical survey, and fieldwalking as a series of scale-matched overlays such as can be done digitally using a geographical information system (GIS).

**Excavation** involves the careful systematic analysis, recording, and removal of archaeological deposits, usually in reverse stratigraphic order to the way they were deposited in the first place. Compared to the techniques already described it generally takes place on a relatively small scale, although several different kinds of excavation can be recognized. *Field-evaluation* typically involves test-pits or linear evaluation trenches arranged so as to sample a wider area in order to assess the nature and extent of any preserved archaeology. It is usually carried out as part of an assessment process in advance of development. *Open area excavation* by contrast involves the

total examination of a defined site or a part of it with all features and deposits sampled and recorded. *Strip record and sample excavation* is applied to very extensive areas which are opened up by mechanically removing the topsoil to reveal extant features and deposits which are then mapped and a selection excavated. Although the practice of excavation goes back to at least the eighteenth century, the size and number of excavations undertaken rose markedly through the late twentieth century for two reasons. First, it has become clear that in order to understand what went on at a site a significant portion of it must be examined; and, second, the scale of potential threats effecting known sites has increased. Kitty Richardson was one of the pioneers of extensive open area excavations with her work at Boscombe Down West, Wiltshire, in 1949 ahead of the construction of an airfield. The tradition was carried on by Geoff Wainwright with excavations of later prehistoric enclosures at Tollard Royal, Wiltshire, and Gussage All Saints, Dorset, in 1965 and 1972 respectively, and at the henge enclosures of Durrington Walls, Wiltshire, and Mount Pleasant, Dorset, in 1966–8 and 1970–1. Still larger trenches were opened by Margaret and Tom Jones at Mucking on the Thames gravels near Gravesend, Thurrock, eventually covering about 15ha in advance of gravel quarrying. At Fengate, Peterborough, Francis Pryor machine-cut trenches exposing an area of about half a square kilometre between 1971 and 1978 in advance of industrial development to provide a clear insight into land use on the edge of the Fens through later prehistory. In Scotland Gordon Barclay and others exposed an area of about 20ha in order to investigate fourth, third, and second millennium BC ritual and ceremonial features at Balfarg/Balbirnie, Fife, between 1971 and 1985 in advance of the expansions to Glenrothes New Town. What is probably the largest archaeological investigation in the UK to date was carried out between 1996 and 2007 during the construction of the high-speed rail link between London St Pancras Station and the Channel Tunnel near Folkestone in Kent, a distance of 109km with more than 130 separate sites of all periods investigated. Several hillforts in southern England have been substantially excavated through large-scale excavations prompted purely by research rather than any specific threat, among them Danebury, Hampshire, excavated by Barry Cunliffe between 1969 and 1988, and Crickley Hill, Gloucestershire, examined by Philip Dixon between 1969 and 1993. The quality of evidence from excavation is high and new digital technologies are increasingly used to record and document the gradual dissection of a site. By carefully removing one layer within a deposit at a time the sequence of deposition can be built up and the finds and structures carefully related to one another. Even a medium-sized site will have several thousand individual layers or contexts and in some cases thousands of finds, each representing a particular episode or event in its complex history and development. The laws of stratigraphy established back in the nineteenth century remain the basis for determining which deposits are earlier and which are later.

## ANALYSIS

The evidence available from the various techniques just discussed is only of use if it is analysed to reveal patterns and regularities that can tell us something about life in prehistory: the way tools

were made, how houses were built, preferred orientations for the dead, and so on. Such searches for patterns fall into two categories: data handling and technical studies.

Data handling has been revolutionized by the widespread use of computers in archaeological research, especially for the storing, sorting, and cross referencing of digital information. Sophisticated computer programs are now available to assist in the recognition of posthole patterns which might indicate the position of buildings, and, by comparing the different types of finds from individual layers examined by excavation, it is possible to work out the sorts of activities undertaken in different parts of a site. GIS provides a ready means of spatial analysis for all kinds of datasets.

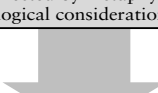
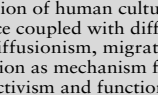
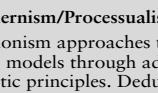
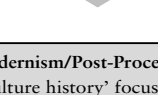
Technical studies are only limited by the technology available. Many focus on characterizing materials found on excavations. As early as 1923, for example, pieces of stone from Stonehenge, Wiltshire, were petrologically studied by Herbert Thomas and identified as spotted dolerite from the Preseli Mountains of north Pembrokeshire. Since that time numerous techniques of physical and chemical analysis have allowed the composition of materials to be determined and the materials therefore compared one with another, and with materials of known source, in order to determine the origins of raw materials, technologies of production, and links and associations between source areas and the places where pieces were eventually found.

The biological sciences have made a significant contribution too. Environmental studies represent one of the expanding branches of prehistoric archaeology. By collecting samples of soil from different layers within a site it is possible to extract microscopic remains of once living organisms such as insects, pollen, pieces of charcoal, and tiny seeds which all contribute to building up a picture of the environment within a part of a site or landscape, and the possible range of activities taking place in the vicinity. Among the exciting new developments are studies of ancient DNA to examine genetically the relationships between populations (animal and human), and stable isotope analysis to document diet and establish the home territories in which people and animals grew up or which they visited later in life.

## ARCHAEOLOGICAL THEORY

Archaeology in general, and prehistory in particular, has always been a highly theoretical subject. This is inevitable because, although the subject matter under enquiry is remote, the evidence we have, and the desire to understand the past, only exists in the present; prehistory is, quite literally, right here, right now! But theory is not static. The way we understand the past is grounded in broader philosophical positions and intellectual traditions. With reference to the last five centuries in Western Europe, Andrew Sherratt proposed a useful heuristic model, what he calls the European Cultural Dialectic, which identifies two parallel trajectories of thought, each using ideas drawn from other disciplines including philosophy, art history, and literature (Table C). Such borrowings by archaeologists are not always strictly in sync with the application of ideas elsewhere, but rather reflect an idiosyncratic pattern that probably owes much to the maverick character of those responsible for each successive contribution.

**Table C.** Competing philosophical traditions and theoretical trends in British prehistoric archaeology modelled as a European cultural dialectic showing the cycle of dominance between Enlightenment and Romanticism. [Sources: Sherratt 1996, fig. 1, and Kristiansen 2008, fig. 2, with additions]

| Approximate duration (All dates AD) | <b>Enlightenment</b><br>(Positivist: descriptions and explanations with evolutionary narratives based on order, hierarchy, and progression)                                                                          |                                                                                     | <b>Romanticist</b><br>(Relativist: interpretation and understandings with genealogical narratives focused on meaning, action, growth, and descent)                                                                                                                |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| To 1400                             |                                                                                                                                     |                                                                                     | <b>Age of Myth and Legend</b><br>Folklore and tradition in tension with theological interpretations and religious doctrine.                                                                                                                                       |
| 1450–1530                           | <b>European Renaissance</b><br>Classical revival and the addition of a time-depth to accounts of visible features and remains.                                                                                       |    |                                                                                                                                                                                 |
| 1530–1600                           |                                                                                                                                     |    | <b>Reformation</b><br>Finding the roots of northern peoples and indigenous cultures detached from Rome and the influences of the classical world.                                                                                                                 |
| 1600–1720                           | <b>Enlightenment</b><br>Rationalism, comparative ethnography, ‘natural philosophy’, and the ‘Scientific Method’ show the breadth and depth of human cultural diversity.                                              |    |                                                                                                                                                                                 |
| 1720–1800                           |                                                                                                                                     |    | <b>Romanticism</b><br>Links made between indigenous peoples (Ancient Britons) and the remains visible in the landscape with appeals to emotions rather than intellect.                                                                                            |
| 1800–1910                           | <b>Positivism</b><br>Recognition of ‘facts’ and ‘laws’ (Evolution; Stratigraphy; Uniformitarianism, etc..) unaffected by metaphysical or theological considerations.                                                 |   |                                                                                                                                                                                |
| 1910–1965                           |                                                                                                                                   |  | <b>Nationalism-/Culture-History</b><br>Recognition of human cultures in time and space coupled with diffusionism, hyper-diffusionism, migrations, and colonization as mechanism for change. Inductivism and functionalism.                                        |
| 1965–1985                           | <b>Modernism/Processualism</b><br>Neo-evolutionism approaches to cultural systems and models through adaptations of cybernetic principles. Deductivism, middle range theory, New Archaeology and Rescue Archaeology. |  |                                                                                                                                                                               |
| 1985–?                              |                                                                                                                                   |  | <b>Post-Modernism/Post-Processualism</b><br>‘New culture history’ focused on the character and nature of ‘being’ in the world. Agency, multi-vocal narratives, phenomenology, identity, and gender central to ideas of intentionality, meaning, and significance. |
| ?                                   | <b>?Scientia</b><br>Integrating sciences with the humanities for the creation of multiple polythetic knowledges                                                                                                      |                                                                                     |                                                                                                                                                                               |

The first trajectory in Sherratt's model is predominantly 'enlightenment' in its approach, providing evolutionary narratives in which order, hierarchy, and progression are paramount. Models of change are deterministic, and analysis is largely comparative. Such attitudes can be traced from the classical revivals of the Renaissance in fourteenth-century Europe, through the Age of Enlightenment in the seventeenth and eighteenth centuries, to positivist science from the early nineteenth century, and, most recently, modernist and processualist views current from the mid twentieth century.

The second trajectory is predominantly 'romantic' in its vision, with genealogical narratives focusing on meaning, action, growth, and descent. It is grounded in contextualist and relativist modes of thinking to produce accounts of the past that are largely interpretative. This line of approach comes into sharp view during the Reformation in Europe in the early sixteenth century, but its concern for the roots of northern peoples and the local origin of archaeological remains can be glimpsed among the mythical histories of medieval times. Later movements favouring such approaches include the Romanticism of the eighteenth century, nationalism in the late nineteenth and early twentieth centuries, and, currently, post-modernism and its counterpart in Post-processual Archaeology from the late 1980s onwards.

While each of these trajectories unfolds in parallel, the dialectical element of Sherratt's model emphasizes the periodic shift in dominance between the two trajectories. Phases of popularity, stability, and contentment with one line of thinking lead to disenchantment, challenge, and revolt, and consequently a shift back to the other approach. At any one time there is a favoured, rather visible, dominant tradition on one trajectory, while research on the parallel line takes on a reduced significance until the next shift in emphasis rekindles attention. The picture is rather akin to what the philosopher Alfred Kuhn once described as a series of 'paradigm shifts'.

Antiquarian interests through the seventeenth and eighteenth centuries, and the emergence of the Three Age System in the context of broader interests in positivist science during the mid nineteenth century, have been discussed earlier in this chapter. The current spectrum of theoretical positions can be traced back to the 1960s with the emergence of what became known as the 'New Archaeology', also known as 'Processual Archaeology' and more latterly by Colin Renfrew's term 'Social Archaeology'. Drawing on work in other disciplines, notably social anthropology, an holistic approach to prehistory developed which concerned itself not just with reconstructing static pictures of society at particular points in time but also, more importantly, looking at the dynamics of prehistoric societies through time. Anthropology offered many ready-made theories appropriate to the study of primitive societies, and some were applied to archaeological examples.

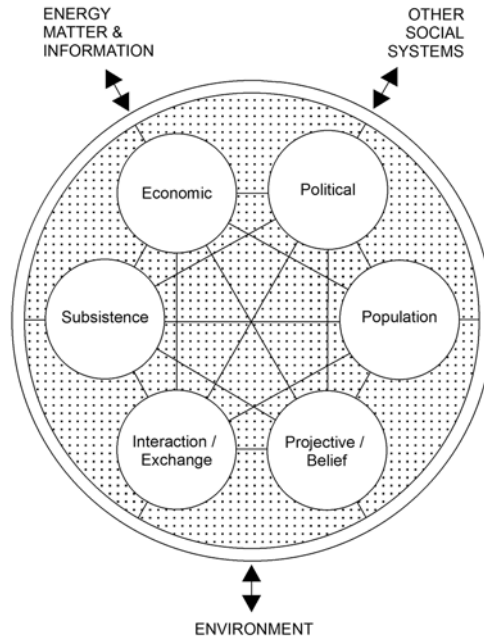
At the most fundamental level much attention has been given to the formation of the archaeological record and the way it is interpreted and analysed. What were flint tools actually used for? How were houses built? What do collections of animal bones mean? And what was the function of rock-cut pits? By carrying out experiments, and by closely observing the behaviour of present day and recently recorded extinct primitive societies, it was considered appropriate to establish a range of possibilities in response to such questions. On occasion, by comparing the results of

observations and experiments with what can be seen in the archaeological record, fairly specific answers were found. Thus, for example, experiments at the Butser Hill Iron Age Research Farm in Hampshire demonstrated the efficiency of rock-cut pits as grain storage silos, and the robustness of timber-framed roundhouses to withstand inclement weather. Different types of animal bone assemblages variously representing primary carcass dismemberment, butchery, or food preparation were distinguished on the basis of the different proportions and types of bones present. When undertaken rigorously, experimentation and careful observation led to the identification of new things to look for in the archaeological record, tell-tale signs of particular activities or processes.

Much attention was also directed towards understanding the form, organization, and complexity of prehistoric societies. Technological classifications such as 'Neolithic' or 'Bronze Age' say nothing of the internal workings of the society which could differ widely among stone-using or bronze-using communities in different areas. Working again from progress made in anthropology, more socially meaningful classifications were adopted and applied to the evidence from prehistory. Elman Service suggested that three types of primitive society could be recognized on the basis of social organization: bands, tribes, and chiefdoms. In contrast, Morton Fried put forward the suggestion that political structure might be more important, and accordingly suggested the identification of egalitarian societies, ranked societies, and stratified societies. The problem for prehistorians was translating these ideas into the sort of evidence which might be recovered archaeologically. Studies of the spatial arrangements of societies represented by their monuments and settlements, together with investigations into the relationships that existed between groups as represented by exchanged goods, provided the most successful lines of enquiry, but the search for types of society was largely abandoned during the 1970s in favour of studies connected with social dynamics.

Social dynamics and social change together provide the theme for much archaeological theory through the late 1960s and 1970s. At first, objective attempts to understand social change drew heavily on what is known in the social sciences as Systems Theory. Applied to British prehistory by David Clarke, Systems Theory was used in an attempt to examine complex entities as a series of separate components or sub-systems (4). The operation of each sub-system, and its relationships with other sub-systems, formed the focus of interest. Change might originate within the system through fluctuations in the operation of one or more sub-systems, or could be forced upon a system from outside. In looking at prehistoric societies topics such as economics, subsistence, trade, population, and ritual formed the basis for defining sub-systems. Specific analytical approaches to these themes were developed, often focusing on the spatial implications of patterns of activity within each because spatial relationships could potentially be recovered archaeologically.

Among the most successful lines of enquiry was the analysis of production and exchange. Anthropological studies demonstrated that among primitive societies trade does not take place in the same way as in modern western societies, but rather is dominated by varying degrees of obligation between exchange partners. Thus at the household level items might pass between



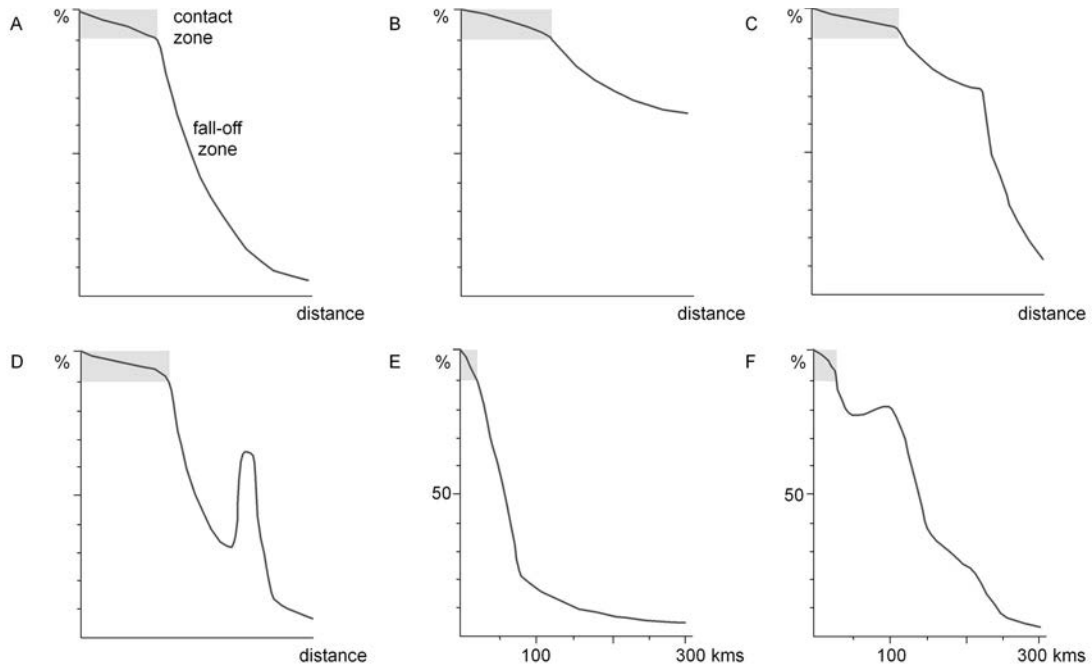
**Figure 4** Simplified model of a social system conceptualized as a set of six sub-systems each defined as groups of related everyday activities. Possible relationships between sub-systems are shown, and the main interactions between the system and its environment are described. [Source: Author]

individuals frequently and with no obligation to reciprocate, but on a wider scale exchanges between communities may only take place at specified times, in specified ways, with very clear rules of reciprocation which may be far from simply matching the value of goods going one way with another commodity going the other. Exchange practices between particular sections of societies, for example exchanges between group leaders, were also documented. From these observations it was suggested that different practices would be represented archaeologically by different patterns in the distribution of artefacts recorded away from their source: fall-off patterns as they are called (5). Through plotting fall-off curves based on the frequency of objects found against distance from source, local production is able to be distinguished from regional production and several different types of exchange systems identified.

By the mid 1980s the New Archaeology had lost much of its novelty and was running out of steam. In its place at the forefront of new thinking was what Ian Hodder dubbed 'Post-processual Archaeology', a much more interpretative kind of archaeology prompted by a renewed interest in Marxist analysis. Attention focused on individuals rather than whole societies, and the underpinning philosophical roots were firmly embedded in the Romanticist strand of thinking identified by Sherratt.

Post-processual Archaeology is not a single unified set of theory but rather a reaction against positivist approaches. Great emphasis is placed on the way people developed specific systems of





**Figure 5** Distance decay curves modelling the decreasing frequency of goods (fall-off) with distance from source. Expected fall-off curves for A: Down-the-line gift exchange; B: Prestige goods exchange; C: Freelance trading; D: Directional trading with trading outposts or redistributions centres. Recorded fall-off curves for: E: Group VII stone axes made at Graig Lwyd, Conwy; F: Group XII stone battle-axes and axe-hammers made at Corndon Hill, Powys. [After Renfrew 1972, 466–70 and Author]

thought, beliefs, and associations of ideas, which they then articulated through the manufacture and use of objects, the construction of monuments and structures, and recurrent patterns of behaviour. The assumption is made that material culture, the objects and constructions of everyday life, are meaningfully constituted in relation to a set of symbolic schemes that collectively represent a social reality. Understandings of human behaviour must be sought in the societies themselves in order to identify specific, and often rather idiosyncratic, responses to particular conditions. Appropriate lines of enquiry thus include the investigation of social power, structure, contradiction, social change, and gender. A key concept is that of agency: people are knowledgeable agents and thus attention should be paid to questions of intention, meaning, and the signification of action in order to understand past social phenomena.

One of the most significant contributions made by Post-processual Archaeology is in the study of ancient landscapes. Building on the idea that people do not operate within single ‘sites’ so much as inhabit potentially infinite spaces allows recognition of the social use of space. Thus the way people organize space within their dwelling might be based on a particular cosmological

view of the world that also finds expression in the organization of the farmstead in which the dwelling lies, and indeed the landscape in which the community lives. Such cosmologies might, for example, draw parallels between the passage of a person's life and the rising of the sun, its journey across the sky, and the sunset in the west. Expanding such thinking, Colin Richards has drawn attention to the way that houses, tombs, and henges of the later third millennium BC in the Orkney Islands share many features of layout and design and can be seen as microcosms of the socially constructed world (see Chapter 5). And just as space is socially constituted so too are time, social order, gender relations, personhood, group identity, and the distribution of power. Post-processual Archaeology has shown that rather than people experiencing a sense of 'being in the world' they are actually complicit players in the act of 'becoming'; nothing is ever complete or finished because things are always going on round about; life itself is a continuous project in a constant state of flux, or, to use Bruno Latour's phrase, an ongoing 'state of emergency'.

Like processualism before it, there are limits to the insights that Post-processual Archaeology can give and history suggests that in due course attention will swing back towards a harder more scientific kind of archaeology grounded in the almost silent development of positivist thinking that has been going on behind the scenes while post-processualism has been in the spotlight. As the twenty-first century begins to unfold there are already signs of disenchantment with a central post-processual ideal that multiple narratives are not only desirable but equally valid; there is a growing desire to re-situate archaeological interpretations in securely assembled data. The concept of *scientia* or 'knowledge' has been suggested as a focus for the next stage in the development of archaeological thinking as it integrates the sciences with the humanities to explore a common world that embraces the determinism of nature and human capacities for moral freedom and reason. Most important is that the increased awareness of the theoretical basis of prehistoric studies over the last 50 years has promoted a more critical approach to the interpretation of archaeological evidence. And while there is no single unified set of theory relating to prehistory, a critically aware discipline is now moving towards a more mature understanding of the complexity of prehistoric societies.

## DATING

The Three Age System provided the main chronological framework for prehistoric studies for more than a century. Artefacts and sites were assigned to specific periods according to their type, and many attempts were made to further subdivide each period by developing complex typological sequences based on traits exhibited in the design of individual pieces or sites. This type of dating is called relative dating. The laws of stratigraphy provided the ultimate test for any proposed sequences, and many failed.

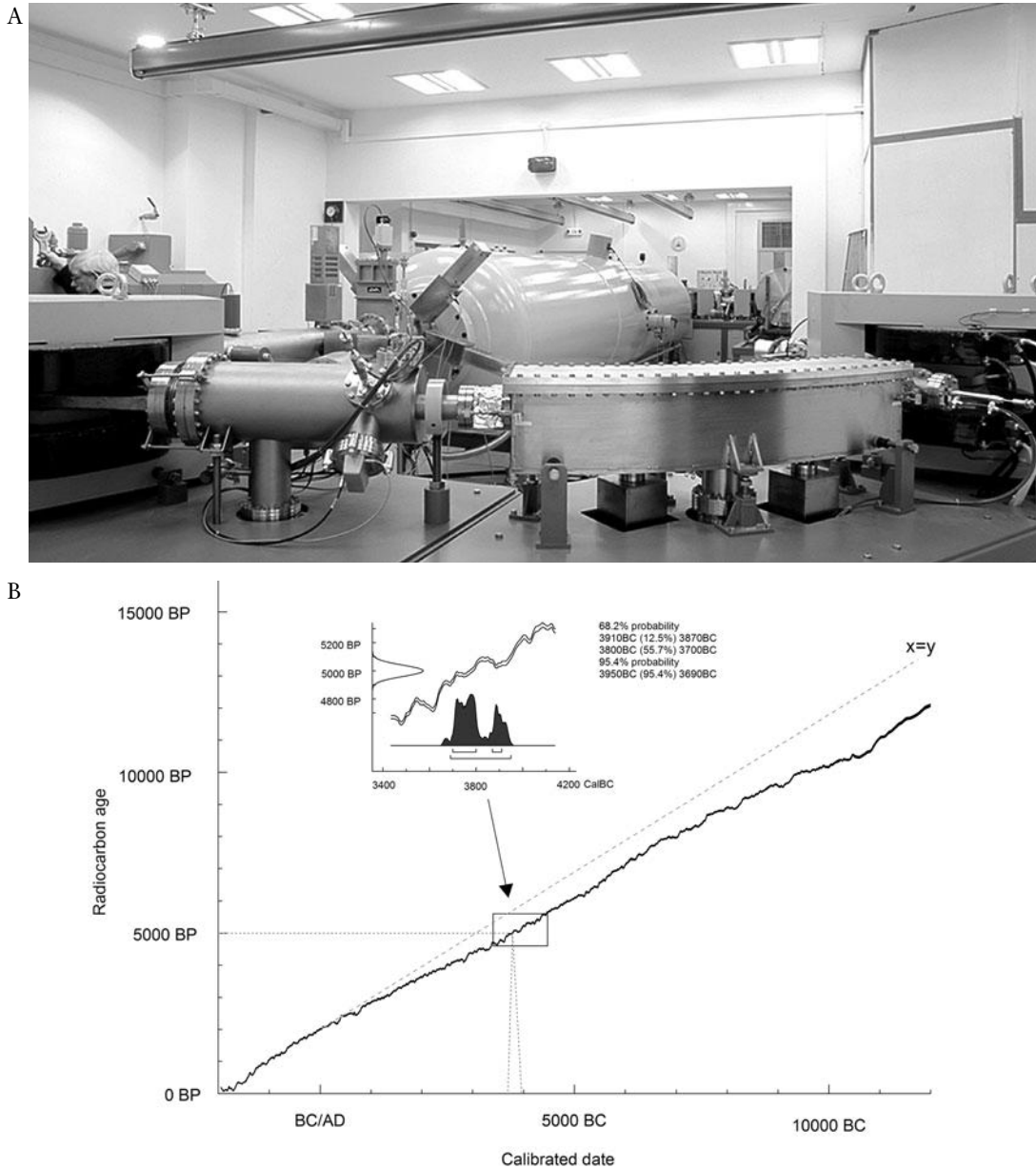
In the late 1940s a new dating technique became available, radiocarbon dating. Developed by the American physicist Willard Libby, radiocarbon dating provided, for the first time ever, a method which could determine the absolute age of any organic matter, animal or vegetable,

recovered from archaeological sites (e.g. bone or charcoal). The method was based on the principles of atomic physics and so the results were not open to the same criticisms as relative dating, although there are many twists and turns in the story of radiocarbon dating in archaeology.

In essence, radiocarbon dating is fairly simple. All living matter contains a fixed ratio of the stable isotope carbon 12 ( $^{12}\text{C}$ ) and the radioactive isotope carbon 14 ( $^{14}\text{C}$ ). The ratio between these is maintained during the life of the organism by the absorption of  $^{14}\text{C}$  from the atmosphere. However, from the time of death no new  $^{14}\text{C}$  is taken in, and what is present begins to decay at a roughly fixed rate while the  $^{12}\text{C}$  remains stable. Carbon 14 decays very slowly such that after about  $5568 \pm 30$  years half of what was originally present has gone. By measuring the ratio of  $^{12}\text{C}$  to  $^{14}\text{C}$  in an ancient sample it is possible to say how much time has elapsed since the organism died. Carbon 14 is of course present in all living matter as very small quantities (one atom of  $^{14}\text{C}$  to every million million atoms of  $^{12}\text{C}$ ) so the measuring equipment has to be very sensitive. Furthermore, because  $^{14}\text{C}$  is naturally present in the atmosphere the equipment has to be able to filter out background ‘noise’. Several different types of counter are now in use and some of those based on accelerator mass spectrometers can measure very small concentrations of  $^{14}\text{C}$  indeed.

The first samples from Britain to be radiocarbon dated were from Stuart Piggott’s 1952 excavations at Durrington Walls, Wiltshire. He expected them to return a result of about 1500 BC on the basis of the established relative chronology, but in fact they were determined as  $2625 \pm 40$  BC and  $2635 \pm 70$  BC which Piggott memorably pronounced as ‘archaeologically unacceptable’ in the pages of *Antiquity* for December 1959. But it was Piggott rather than the dates that were wrong, and as the number of radiocarbon determinates for British prehistory built up so the first radiocarbon revolution saw many established ideas on chronology shattered and familiar types of monument were shown to be much older than previously imagined. Still greater surprise came when it was found that, because of fluctuations in the amount of  $^{14}\text{C}$  present in the atmosphere, radiocarbon years did not correspond with calendar years as had been assumed. In an effort to produce a calibration curve matching radiocarbon dates with calendar years samples of wood from Bristlecone Pine trees were dated. The Bristlecone Pine grows in the White Mountains of California in the United States of America, and individual trees live to be up to 4,000 years old. By counting back the annual growth rings in the trunk, pieces of wood of known age could be dated and the real age compared with the determined age. In this way a rather wiggly curve was produced and ushered in a second radiocarbon revolution as almost all existing dates were found to be too young. Diligent work in many parts of the world has created local calibration curves, that for the British Isles being based on the dating of samples of Irish oaks so that a high-resolution calibration curve is now available going back 26,000 years and all the dates cited in this book have been calibrated using this data (6). Piggott’s original Durrington Walls dates now become 3499–3104 BC (Gro-901a:  $4575 \pm 40$  BP) and 3624–3038 BC (Gro-901:  $4585 \pm 70$  BP) which as it turns out are in good accord with what is now known about the site (see Chapter 5).

Over 10,000 radiocarbon dates are now available for British prehistory and allow an objective prehistoric chronology to be established. The careful extraction and selection of samples from archaeological deposits (material that was alive for less than a year is preferred), the use of



**Figure 6** Radiocarbon dating. A: Part of the radiocarbon accelerator at Oxford University. B: Calibration curve to convert radiocarbon dates to calendar dates based on tree-ring samples of known age. As an example a dotted line leads from a raw radiocarbon age of  $5000 \pm 50$  BP across to the curve and then downwards to give the calibrated date range with a 95 per cent probability of 3950–3690 BC. [Photograph courtesy of Thomas Higham (Oxford Radiocarbon Accelerator Unit). Copyright reserved; Plot after Reimer *et al.* 2004 and OxCal 3.10, Bronk Ramsey 2005]

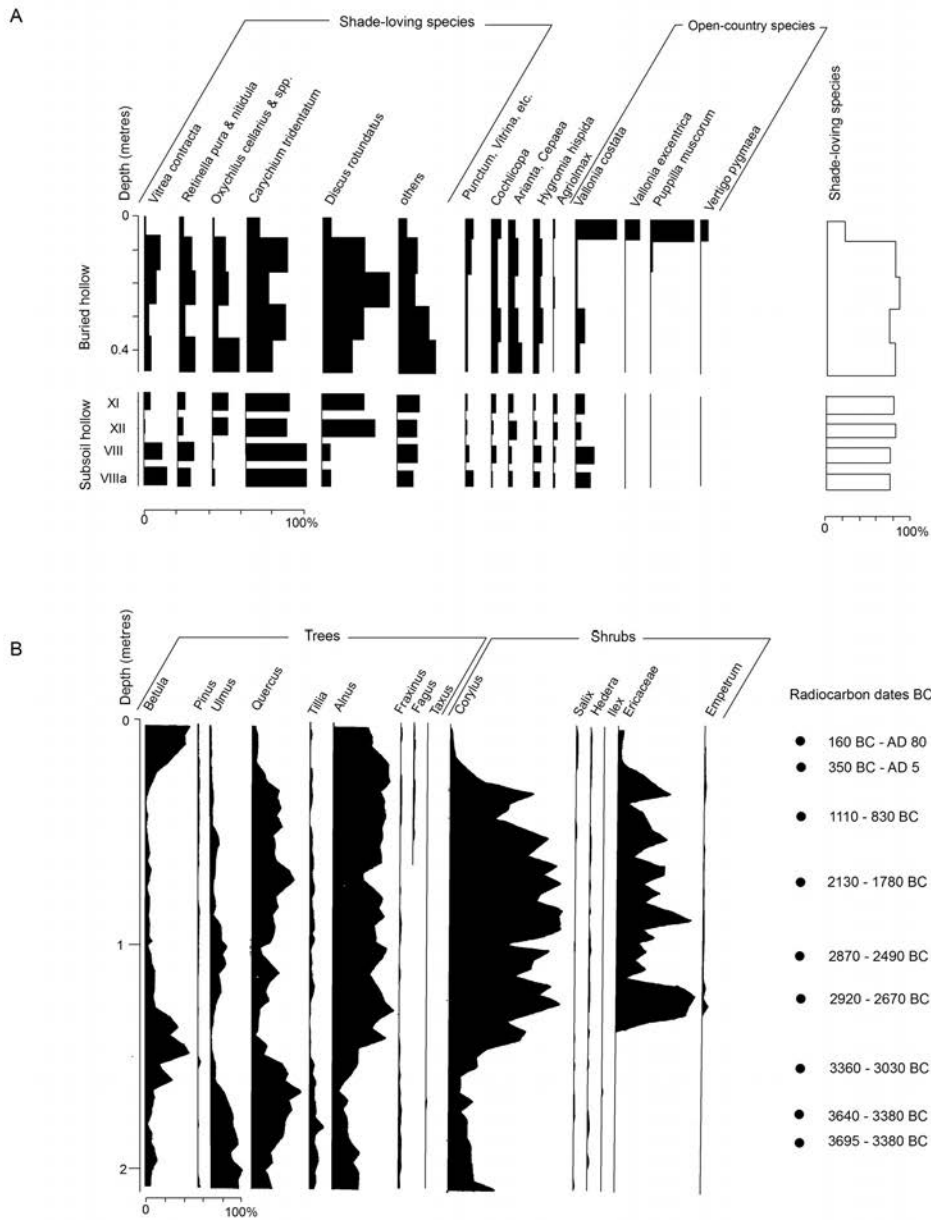
modern calibration curves, and careful statistical analysis of stratigraphically relatable samples make radiocarbon dating a sharp-edged tool with a resolution comparable to that of a single person's lifespan. Rather than talking in terms of millennia it is increasingly possible to comprehend later prehistory at least in terms of centuries and decades. Moreover, the development of high-resolution calibration curves has provided a valuable spinoff in the form of continuous tree-ring sequences. This allows the possibility of comparing tree-ring sequences present in archaeologically recovered timbers with the master curve; where good patterns are represented precise dendrochronological dates can be established for the felling of trees subsequently used as constructional elements. In exceptional cases even the season of felling can be inferred. Dendrochronology has proved especially valuable in the wetlands of the Somerset Levels and the East Anglian Fens.

## THE PREHISTORIC ENVIRONMENT

Although the basic topography and geology of Britain has remained substantially the same since the end of the last Ice Age, other facets of the natural environment, climate, sea level, vegetation cover, and the natural animal species present have been progressively changing. The environment at different times is described in later chapters, but clearly the relationships between the various factors are immensely complex. Changing climate means changes in vegetation cover which in turn changes the range of animal species that can be supported, and so on. People have had a considerable impact too. Over-exploitation of resources, even as far back as the third millennium BC, caused marked changes in the appearance of the landscape and in some areas led to soil erosion and loss of soil fertility. Although it may seem that natural landscapes still exist, for example the uplands of northern and western Britain, even these have been changed beyond recognition by human exploitation during and since prehistoric times.

A number of techniques have been developed to document past changes to the environment using evidence drawn from natural deposits and anthropogenic contexts and various schemes and classifications proposed to describe key periods and events (7). Vegetation history can be reconstructed from the analysis of pollen grains. Slowly developing peat bogs and lake sediments trap pollen from the atmosphere in each successive layer. Pollen is very resilient and can be attributed fairly accurately to the species of plant from which it came. Since all plants give off pollen at some time during the year a picture of the relative abundance of the different types of plants growing in the vicinity of the bog or lake can be built up. By examining successive layers of peat or lake sediment the changing spectra of the vegetation can be seen; these are often described as Pollen Zones starting from the end of the last Ice Age with Zone I through to the present time in Zone IX. By radiocarbon dating distinctive layers some appreciation of the age of successive pictures can be obtained.

In areas where pollen is not preserved, as for example on alkali soils, snail shells can be analysed to provide glimpses of past landscapes. Snails have distinct habitat preferences; some



**Figure 7** Snail assemblage and pollen frequency profiles. A: Snail assemblages recovered from the buried soil and sub-surface hollows at Ascott-under-Wychwood, Oxfordshire. The top of the soil dates to the early fourth millennium BC. Changes in the frequency of shade-loving species, indicating woodland conditions, and open country species, indicating grassland conditions, can be clearly seen. B: Pollen profile from the Abbot's Way, Somerset, showing frequency of tree and shrub pollen. [After Evans 1971, fig. 5; Beckett and Hibbert 1979, fig. 4]

only live in woods, some only in permanent grassland, and some only on cultivated land. By documenting the species present in any given context the conditions prevailing when the context was formed can be determined. Thus snails from beneath the long barrow at South Street, Wiltshire (constructed in the mid fourth millennium BC), were predominantly open-country-loving species and indicate that a dry grassland environment prevailed at the time the barrow was built. A similar assemblage was found in the topsoil underlying a barrow of about the same date at Ascott-under-Wychwood, Oxfordshire.

Animal bones preserved in archaeological deposits allow insights into the range of animal species present at different times, while studies of the structure of soils provide valuable information on past land use and misuse. Changes in sea level are reflected in coastal deposits such as raised beaches and submerged forests.

Climate is the most difficult aspect of the environment to reconstruct yet it is so crucial. Plant and animal species whose distribution is precisely controlled by climate – indicator species – provides one source of information and together with stratigraphic records of accumulating deposits in river valleys and coastal areas allow the creation of a sequence of Biostratigraphic Divisions and Climatic Phases particular to Britain (Table B). On a wider scale ancient weather patterns have been reconstructed through the analysis of deep sea cores and sections through the polar ice caps which preserve tell-tale signs of past conditions in the chemistry of the slowly accumulating deposits of sludge and ice. Examination of these has led to the definition of a series of Oxygen Isotope Stages (OIS) and Marine Isotope Stages (MIS) which extend backwards from Stage 1 representing the present time, to Stage 17 contemporary with the first appearance of people in north-west Europe about 650,000 years ago, and back into periods when this part of the planet was seemingly uninhabited. Comparisons between certain irregular growth patterns represented in tree-rings and data from ice cores has led Mike Baillie to postulate a series of global catastrophes in the form of environmental dislocations at around 2911 BC, 2354 BC, 1628 BC, 1159 BC, and 208 BC, each of which he suggests might have been caused by massive volcanic eruptions or, in some cases, close encounters with comets or their debris.

## UNDERSTANDING THE PREHISTORIC PAST

It will already have become clear that the study of prehistory is not as straightforward as it might at first appear. There is a constant cyclical interaction between developing appropriate theoretical perspectives, recovering new evidence, formulating reconstructions of the past, and then going back to review both the theory and the evidence; a process known as a hermeneutic cycle in which we question how it is that we know what it is that we think we know. The contribution from other disciplines to our understanding of the prehistoric past is also considerable, and the environmental, biological, anthropological, materials, and social sciences especially play a part.

Some things will never be known. The thoughts of prehistoric people are beyond the reach of the archaeologist; so are details of the languages spoken, and in many cases so is much of the

material culture which they used. Wood, leather, and organic fibres, for example, only survive in exceptional and rare circumstances, yet were probably the most widely used materials in many communities. These deficiencies must be kept in mind when considering what is known of prehistoric communities.

In the course of developing reconstructions of the past it is common practice to build a 'model' of whatever aspect is under consideration. Such a model is simply an attempt to portray the known pieces of the picture of the past and suggest relationships between them. They are summaries of complicated patterns and serve as a proposition to be evaluated against new evidence as it is found. Much is already known about the prehistoric past, but the following account can only be regarded as provisional; a series of models of the past. New evidence will come to light, new theory will be developed, and more dates will allow greater refinement of prehistoric chronologies. Each of the following chapters deals with a currently recognizable episode of prehistory.



## 2

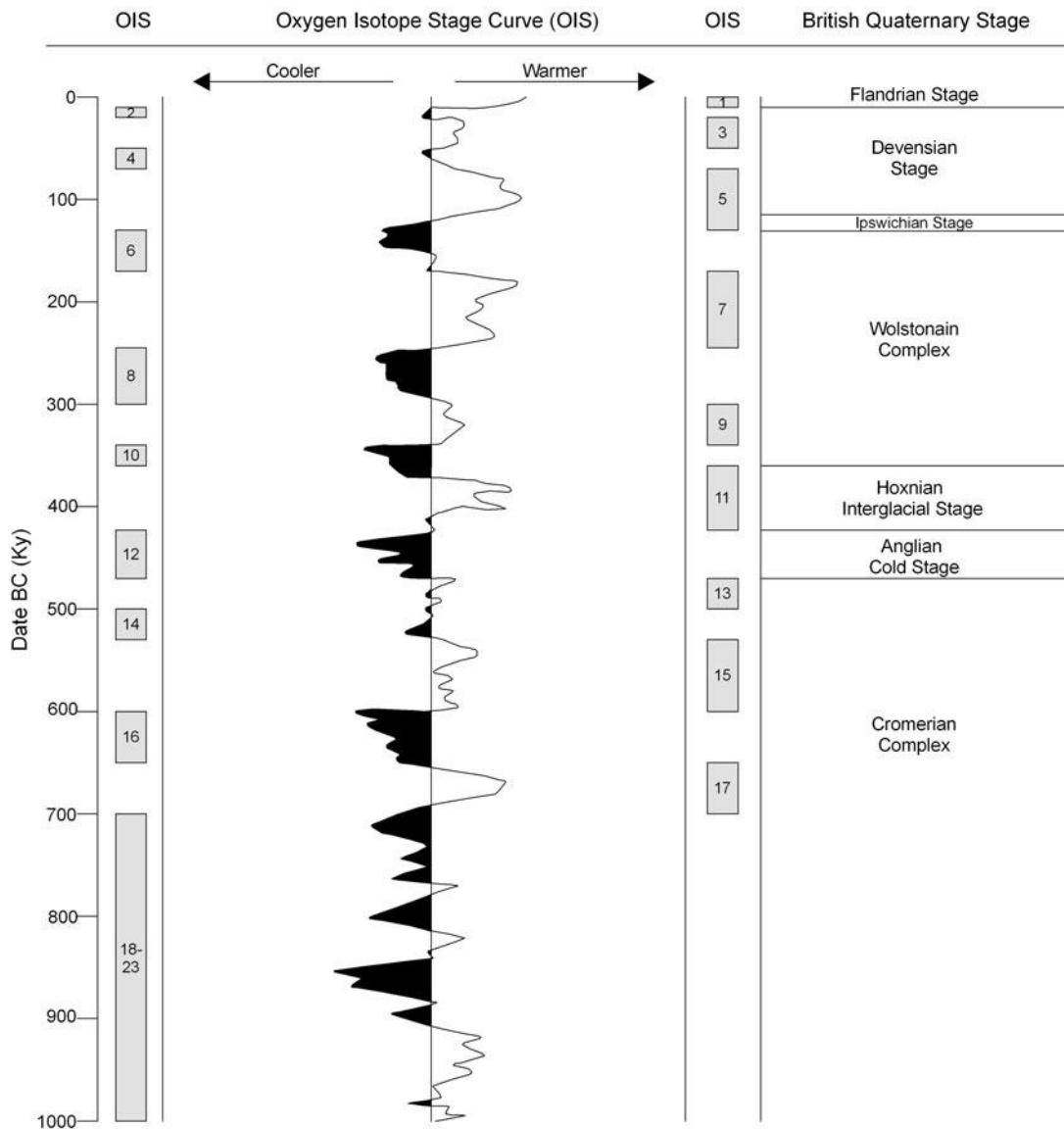
# BEFORE THE FLOOD

## Early hunter-gatherer societies to 13,000 BC

For over 99 per cent of the time that human communities have lived in what is now Britain, hunting and gathering were the mainstays of the subsistence economy. Such a lifestyle involves small, highly mobile, kinship-based groups of men, women, and children with a minimum of equipment and possessions. Archaeologically, such lifestyles leave frustratingly little trace. No structures except basic shelters were erected by hunter-gatherers and they lived within the constraints of their environment rather than by modifying it.

Human groups arrived in Northern Europe during what geologists call the Pleistocene Ice Age. This Ice Age was not a single event, but a series of successively advancing and retreating ice caps spread over something in excess of a million years and driven by long-term deep-seated processes ultimately caused by variations in the earth's orbit of the sun: the Milankovitch cycles of eccentricity in orbit (100,000 year cycle), shifts in the tilt of the earth's axis (41,000 year cycle), and precession as the earth wobbles slightly as it spins (23,000 year cycle). Traditionally, four main episodes of glaciation are distinguished in Europe, although only three are represented in Britain by known physical residues. These are termed the Anglian, Wolstonian, and Devensian glaciations. Before the Anglian, and between each subsequent glaciation, there were warm periods known as interglacials: the Cromerian, Hoxnian, and Ipswichian. The period following the last (Devensian) glaciation is known as the Flandrian (geologically the Holocene) period and is the warm phase in which we now live, seen by many as merely another interglacial stage that if history repeats itself will be followed in due course by another glacial stage. This general pattern is complicated by the fact that glacial stages were interrupted by short warm periods known as 'interstadials' while interglacials were punctuated by cold spells known as 'stadials'. The picture of fluctuating warmer and colder periods can be fairly accurately reconstructed back to the effective maximum range of radiocarbon dating, about 60,000 BC, but beyond this both the sequence of events and their absolute age are far less certain. Analysis of oxygen isotope ratios in samples

taken from cores through the polar ice cap, and deep-sea sediments from the north Atlantic, suggest a constantly changing environment that can be characterized as at least 20 distinct oxygen isotope stages (OIS) back to 750,000 BC, each reflecting particular environmental conditions (8). Since about 700,000 BC there may in fact have been anything up to eight periods of exceptional



**Figure 8** Pleistocene climatic fluctuations based on oxygen isotope stages. [After Wymer 1985, fig. 107 with additions]

expansion of the polar ice caps with intervening periods of shrinkage and marked global warming. The work also shows that intervals between distinct cold phases are irregular, that the duration of exceptionally cold periods and exceptionally warm periods varies greatly, and that, while the identification of broad glacial and interglacial stages is a helpful model, in reality the climate is in a constant state of flux through a series of interconnected short-, medium-, and long-term cycles.

As an added complexity, glaciers liberated and moved vast amounts of rock that was deposited as moraines when the ice sheets melted. This material was then sorted, moved, and deposited again by rivers during interglacials. Thus one of the great difficulties of working with evidence from Britain is that each successive glacial episode disturbed whatever evidence had been left by earlier human groups, and carried tools and objects away from where they were dropped or abandoned. In effect glacial episodes wiped the landscape clean of earlier traces and resorted relicts of earlier times so that it is only by chance that evidence for these early periods of settlement survives *in situ*.

Looked at in the long term these global environmental changes had a major impact on the nature and extent of human occupation in northern latitudes, although very few changes would have been noticeable within the lifespan of a single person and any sense of vacillation would have relied on collective memories and tales embedded in oral tradition. For the routines of daily life there are two overriding considerations: sea level and resource availability.

The amount of water in the oceans changed in harmony with fluctuations in the ice caps, and this in turn brought about changes in sea level. Thus at times of glacial advance, when much water was locked up as ice, the mean sea level fell and what is now Britain was simply a peninsular extension of a European land mass. Conversely, during warm periods when the ice melted and water was released Britain became an island. During the shifts between one extreme and the next there were concomitant changes in drainage patterns with lakes, rivers, and estuaries appearing and disappearing as time went by.

Changing physical conditions of course affected the local ecology and thus the plant and animals species available as food sources for hunter-gatherer populations. During glacial advances those parts of Britain not covered by ice would have been arctic tundra, not unlike areas within the Arctic Circle today. It is sometimes assumed that people were absent from the area at these times but one characteristic of the human species is its adaptability and there is no reason why people could not live on ice fields in the distant past as they have done more recently. During warm periods woodland and forest regenerated and animals suited to such conditions spread from regions further south. Richard West has identified four phases in the development of soils and vegetation after severe glacial episodes: first a pre-temperate phase when boreal trees such as pine and birch establish themselves; second an early temperate phase when mixed oak forest develops; third a late temperate zone when there is an expansion of late immigrant trees such as hornbeam at the expense of the mixed oak forest; and finally a post-temperate zone when boreal elements predominate again and the woodland becomes more open.

## FIRST HUMAN OCCUPATION

Exactly when human groups first made their way into what is now Britain is not yet fully clear, but it was certainly before the Anglian glacial stage (OIS 12) and thus prior to 470,000 BC, the geochronological stage known as the Cromerian complex which comprises three warm phases (OIS 17, 15 and 13) and two cold phases (OIS 16 and 14). By world standards this is late in the spread of the human species. Early hominins, including *Homo habilis* and *Homo ergaster*, had been living in the equatorial zone of Africa since their development from *Australopithecus* about 2.5 million years ago. By about 1 million years ago hominins that Clive Gamble collectively refers to as the ‘ancients’ had spread out of equatorial Africa – *Homo ergaster* to western Asia and southern Europe – and by 850,000 years ago can be recognized still further north as *Homo heidelbergensis*. A second branch of the *Homo ergaster* species is found in eastern and south-eastern Asia where it is known as *Homo erectus*.

As part of this expansion of people across the Old World access to what is now Britain would have been easy because, through most of the Cromerian, Britain was a peninsula of the great north European plain with the South Downs of England extending across what is now the English Channel to the Pas de Calais. Sites attributable to the Cromerian are currently known in three parts of southern Britain – south-west England; the Midlands and East Anglia; and the south coast – although not all have yielded humanly created artefacts and only one is associated with human remains (9).

Starting in the south-west, Kent’s Cavern, Torbay, was first excavated by Father John MacEnery in 1825–9. It is truly a cave in the sense of an accessible cavern suitable for occupation, although the nature of this early excavation is such that few details were recorded. Handaxes were recorded in the lowest levels, along with the bones of sabre-toothed tiger and two species of vole which are thought to have become extinct before the Anglian glaciation. Equally difficult to interpret are the deposits uncovered by limestone quarrying at Westbury-sub-Mendip, Somerset. This is not a cave as such but a fissure connected to a cavern system in which occupation material became trapped and thus survived the effects of later glaciations. The site was discovered in 1969 and subsequently investigated by Mike Bishop and Chris Stringer. Analysis of the material is still in progress, but finds include worked flint flakes and the bones of bear, jaguar, wolf, horse, rhinoceros, and red deer. The last mentioned includes pieces with cut-marks made by flint tools, and elements of the deposit may be as old as 575,000 BC (OIS 15).

Across the south Midlands and East Anglia most of the known pre-Anglian sites lie along the course of a now-extinct river system, known as the Bytham River, which ran west to east from near modern-day Warwick to empty into the North Sea near Lowestoft. This corridor into the heart of Britain may have provided a routeway for hunter-gatherer groups to colonize the area and reach the rich hunting grounds of the midland plains. At Waverley Wood and Pool’s Pit, Stoneleigh, Warwickshire, handaxes fashioned from blocks of quartzite and andesite ultimately derived from North Wales were found associated with a temperate woodland flora and a fauna that included elephant, horse, and ox/bison. Downstream, further finds have been made at several sites including Shrub Hill near Feltwell, Norfolk; Hockwold-cum-Wilton, Norfolk;



**Figure 9** Map showing projected river patterns and landforms during the Cromerian Complex (OIS 17–13) and the maximum extent of Anglian Cold Stage ice sheets (OIS 12). [After Wymer and Robins 2006, 462 and Wenban-Smith and Hosfield 2001, figs. 3.5 and 3.6, with additions]

Brandon, Suffolk; Lakenheath, Suffolk; and High Lodge and Warren Hill near Mildenhall, Suffolk. Some of the oldest sites lie in the former estuary of the Bytham River, an old ground surface that is now emerging from below a thick overburden of late Cromerian and Anglian moraines as a result of coastal erosion.

At Pakefield, Suffolk, local collectors identified an area of old land surface which was investigated in 2006 by Chris Stringer and researchers working on the Ancient Human Occupation of Britain (AHOB) project. This brought to light a few rather primitive-looking flint tools made from local pebbles, associated with a rich faunal assemblage including the bones of hippo, rhino, mammoth, straight-tusked elephant, bison, giant deer, scimitar-toothed cat, lion, hyena, wolf, and bear. More than 150 species of plants have been recognized from preserved fragments of wood, macrofossils, and pollen, among them water chestnut, floating fern, brittle water nymph, and broom crowberry suggesting a rather warmer climate than obtains in the area today, and a mixture of oak woodland and open grassland. The presence of bones from a species of vole (*Mimomys pusillus*) that is extremely rare in Britain and is not known anywhere in the world after about 650,000 BC, coupled with environmental evidence and the analysis of amino-acid preserved in shellfish from the site, suggests the human activity may be placed in OIS 17 between 650,000 and 700,000 BC. Of similar date is the nearby site of Norton Subcourse, Norfolk. Now a quarry for sand and gravel, abundant evidence has been recovered showing that in early times the area was fenland surrounded by reeds and alder frequented by horse, elephant, deer, and hippos, some of which had fallen prey to packs of hyenas. As yet, however, no tools or evidence of human occupation have been found. Later, perhaps from OIS 15 at about 560,000 BC, is Happisburgh, Norfolk, where coastal erosion has revealed another old land surface on which local collector Mike Chambers found a black flint handaxe and bones of deer and bison while beach-walking in March 2000. A re-examination of nineteenth-century finds from the area together with new excavations by the AHOB project has revealed another handaxe, over 50 worked flints, and animal bones of bison showing cut-marks and impact-damage from dismemberment and butchery. And further north still at West Runton, Norfolk, the remains of an early species of mammoth (*Mammuthus trogontherii*) were excavated from the Cromerian Beds in January 1992. This male mammoth was over 40 years old, stood about 4m high, and lived in a temperate forest environment with nearby areas of reed-swamp and fen in climate not unlike that of today.

The largest and perhaps best-known site of the period is Boxgrove, West Sussex, in central southern England. Here excavations in 1983–5 and again in 1989–9 revealed a preserved ground surface that during OIS 13, around 500,000 BC, had been a sandy beach in front of a high chalk cliff containing natural outcrops of flint. Red deer, bison, horse, elephant, and rhinoceros grazed the coastal plain, and predators such as lion, hyena, and wolf were there too. Human groups were drawn to the rich hunting and the ready supply of flint for manufacturing tools. Several visits are represented by archaeological evidence across a wide area of the former beach, including tool-making positions and the remains of butchered giant deer, red deer, bison, horse, and rhinoceros. Nearby a human tibia and a tooth were found in 1993–4, the former representing a well-built *Homo heidelbergensis* adult male about 40 years old who would have stood 1.8m

tall. It is the first secure evidence of the ancients themselves in north-west Europe and opens up many questions as we know so little about these people and their appearance. It is not known, for example, whether they were dark or light skinned, whether they had more or less body hair than modern humans, or whether sexual dimorphism was as marked as it is now.

Throughout pre-Anglian times these communities of ancients were periodic visitors to the far north-west of Europe. It has sometimes been suggested that the ancients were scavengers, living off animals hunted and killed by other species. But the evidence from Boxgrove suggests that they were in charge. Animal bones from the site show the gnaw-marks of carnivores to have been superimposed on humanly made cut-marks demonstrating that people were the primary hunters and that discarded debris was in fact later scavenged by other animals. The carcass of a large animal was a valuable resource. Not only did it provide more meat than a community could comfortably consume, but the skin would be removed for making clothes and tents, the stomach would make a useful waterproof bag, and the guts and sinews could be used for cord and twine. Some form of language is implied by the combined social action represented by hunting, and the consistency evident in the production of the main forms of stone tool.

Where reasonably large collections of tools have been found at pre-Anglian sites they are dominated by various kinds of oval or diamond-shaped handaxe. These distinctive tools were made by taking a suitable block of stone, usually flint or quartzite, and then roughly shaping it by removing large flakes from around the sides before thinning the block by removing flakes from the main surfaces, and finally finishing it with smaller flakes to create a pleasing and practical artefact. A soft hammer such as a piece of bone or a block of wood was used by the knapper, and experienced workers might well have carried a favourite hammer around with them. A skilled knapper could produce such tools in a matter of minutes, and at Boxgrove there are small piles of debris left behind as a result of exactly such actions as well as more than 300 finished tools. Handaxes were used for dismembering, skinning, chopping, cutting, and butchering animals, as well as basic woodworking tasks. Smaller tools such as scrapers and knives were also made, sometimes using flakes and waste from the production of handaxes.

The creation of stone tools represents far more than a technological process. Embedded in the style and form of the items crafted by ancient knappers is a wealth of cultural information passed from generation to generation that allows at least some understanding of the social links between communities across time and space. In the case of the pre-Anglian tools known from Britain it is towards the south and south-west, to France and Spain, that we must look for comparisons. And it is to these areas that people retreated as the intense cold of the Anglian glaciations made it less and less attractive to hunt in the plains and forests of Britain.

## ANGLIAN COLD STAGE

Between about 478,000 BC and 423,000 BC (OIS 12) Britain experienced one of the coldest periods of the Pleistocene Ice Age, with glacial ice sheets extending as far south as a line drawn

through the southern shore of the Bristol Channel, southern Cotswolds, Thames Valley, and Essex coast. As a result, the Bytham River catchment was destroyed and many of its channels filled; land surfaces were buried by more than 10m of glacial till and boulder clay. The River Thames was pushed southwards and the area immediately south of the ice must have been an inhospitable place, an arctic desert. Whether cold-climate hunters ever ventured here is not known; certainly there is no evidence that they did.

## HOXNIAN INTERGLACIAL STAGE

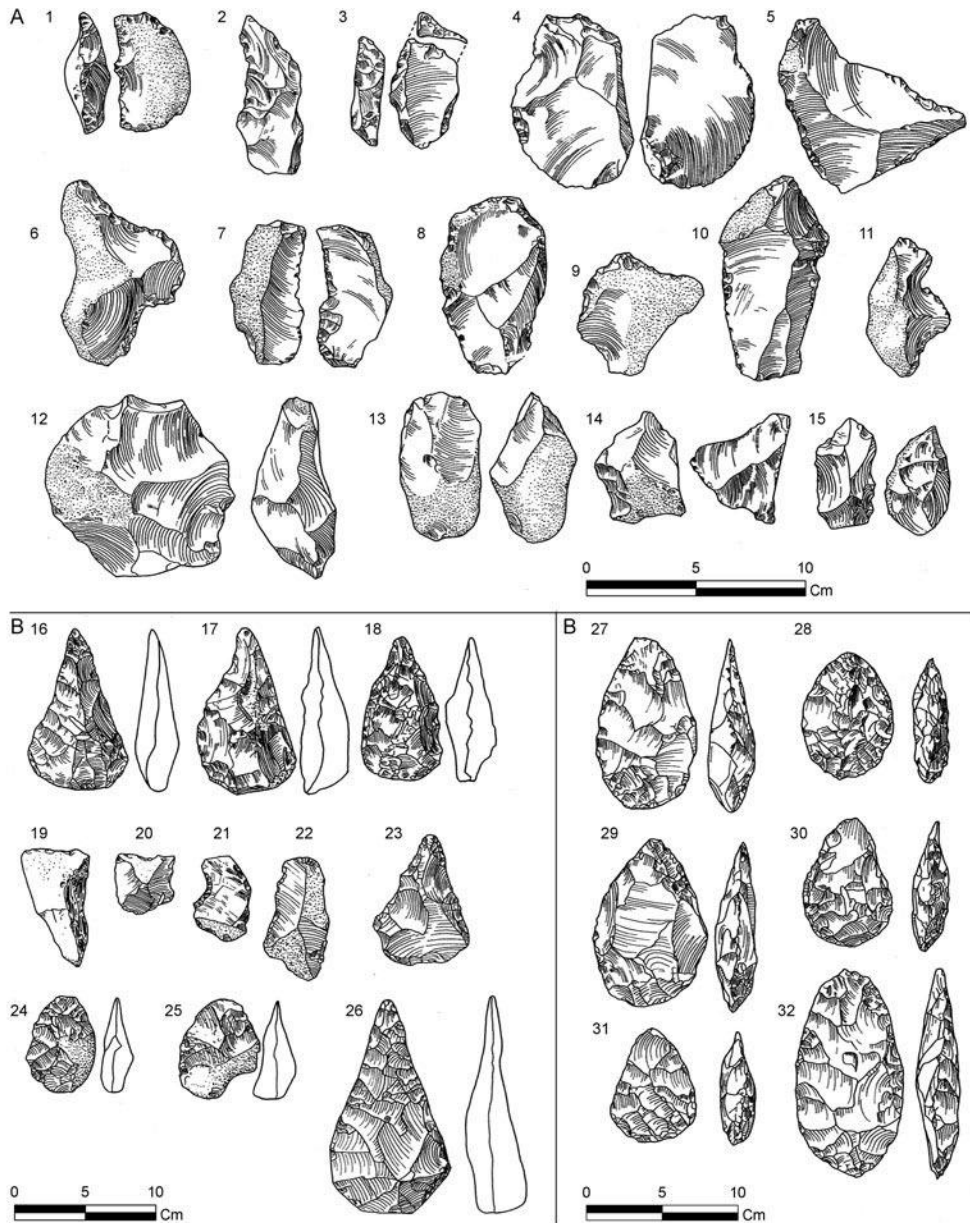
Following the Anglian was a relatively warm period of more than 60,000 years between about 423,000 BC and 360,000 BC (OIS 11), sometimes known as the Great Interglacial. Britain was re-colonized early in the Hoxnian when low sea levels permitted attachment to the continental mainland, but detailed investigations of sea level change by Mark White and Danielle Schreve suggest that global warming transformed Britain into an island towards the end of the Stage. John Evans has shown that much of the Hoxnian was characterized by a mild oceanic climate with mixed deciduous woodland dominated by hazel, yew, alder, oak, and elm, with open grassland in the larger river valleys. Herds of large herbivorous mammals were plentiful and carnivores such as bear, wolf, and lion roamed the land to provide rich resources for mobile hunters and gatherers.

Archaeologically, several thousand sites and findspots of artefacts relating to this period are known across southern Britain which suggests that at times it was a relatively busy place. Good sources of workable flint and stone useful for making tools and weapons may have been one of the factors that encouraged people to come to Britain although bearing in mind the incredibly long duration of the Hoxnian it is unlikely that there were ever more than a handful of small communities here at any one time.

Technologically, there is evidence of two distinct tool-making traditions represented among the material recovered to date and this has led many scholars to suggest the presence of two culturally distinct groups of people. One is known as the Clactonian, and is named after a rich collection of material from Clacton-on-Sea, Essex. The tools which characterize this tradition are mostly made of flint and comprise flake tools – that is, implements made using flakes of flint struck from nodules called cores (10A). Some tools are regarded as rather crude and hardly seem to warrant the term ‘tool’ at all. Handaxes are absent, but some cores may have been used as choppers or chopping tools. The second tradition, known as the Acheulian, is named after a collection of material from St Acheul near Amiens (Somme), France. Toolkits in this industry are dominated by handaxes made in a wide range of shapes and sizes (10B & C). Early examples often appear to have a rather heavy butt and a thicker cross-section than some later examples. Scrapers, knives, burins, edged flakes, and points are also represented.

Much debate surrounds the interpretation of these two traditions. John Wymer long ago suggested that on typological and stratigraphic grounds the Clactonian tradition is the earlier of the two and that it was succeeded by the Acheulian. Certainly this is true at several sites – including





**Figure 10** Clactonian and Acheulian tradition flint tools. A: Clactonian tools from Jaywick Sands, Clacton-on-Sea, Essex: 1–11: worked flakes/flake tools; 12–15: cores. B: Acheulian artefacts from the middle gravels at Swanscombe, Kent: 16–18 and 23–26: handaxes; 19–22: flake tools. C: Acheulian ovate handaxes from the upper loam deposits at Swanscombe (27, 28, 31 and 32) and Pearson's Pit, Dartford, Kent (29 and 30). [After Oakley and Leakey 1937 figs. 3, 4 and 5; Roe 1981 figs. 3.6 and 3.7]

Swanscombe, Kent; Barnham, Suffolk; and Elveden, Suffolk – but it is now recognized that the Clactonian is by no means the earliest tool-making tradition in Britain as it appears to be absent from pre-Anglian contexts and even in the early Hoxnian it is probable that the two were contemporary. Another widely mooted possibility is that the two traditions actually represent different kinds of activity by a single population, for example woodworking in the case of Clactonian assemblages and hunting in the case of Acheulian assemblages. It is an interesting possibility, but one now confounded by the discovery in 2003 of an early hunting site at Ebbsfleet near Dartford, Kent, during the construction of the Channel Tunnel High Speed Railway line. Here a straight-tusked elephant had been killed and butchered, but only Clactonian material was present, some of it seemingly manufactured at the site.

A rather neat heuristic solution to the problem has been proposed by Mark White and Danielle Schreve based on the social dynamics of hunter-gatherer groups and the changing biogeographical conditions through the Hoxnian. They suggest that during the early and middle Hoxnian, when Britain was still attached to the Continent, mobile groups from two quite separate areas of the near-Continent began exploiting the rich resources opened up in Britain by the disappearance of the Anglian ice sheets. One, represented by the Clactonian, originated to the east in what is now Germany and southern Scandinavia where flake-based tool-making are well represented at sites such as Schöningen (Lower Saxony) and Bilzingsleben (Thuringia) in Germany. They may have been the sole users of Britain during the early part of the Hoxnian but their interest was relatively short-lived and when rising sea levels turned Britain into an island they ceased to come here. The second, represented by the Acheulian, originated to the south in what is now northern France and Spain, in effect perpetuating much older ties to what might be regarded as traditional hunting territories that extended back into Cromerian times. Movements to and fro were no doubt fairly regular while Britain was attached to the Continent, but when it became an island those communities remaining here seemingly had rather less frequent contact with their homeland. As White and Schreve note, the divergence of cultural and technological traditions may be seen rather clearly in the different styles of handaxe used in different areas. In northern France, for example, twisted tips are common, but such features are rarely seen in contemporary tools from Britain. Similarly, Paul Callow notes the abundance of elongated cordiform handaxes in France and their relative rarity in Britain. Axiomatic to this model is the co-existence in Britain of culturally diverse hunter-gatherer groups during the early Hoxnian, both seemingly exploiting similar favoured environments beside rivers and lakes mainly in the lowlands of the south and east. Despite the presence in museum collections of more than a dozen handaxes with Scottish provenances, Alan Saville has shown that none certainly derives from highland Britain.

### ***Clactonian occupation***

Riverside sites seem to have been favoured by the users of the Clactonian technology, possibly because of the advantages such places provided as a focus for resources, animals coming for

water, a rich variety of plants, and a range of aquatic species. At Clacton-on-Sea itself, excavations in gravel deposits at the Golf Course Site revealed what had been a riverbank in early Hoxnian times. The site, which was probably simply a temporary camp, showed that deer, bison, horse, elephant, and rhinoceros had either been hunted or successfully scavenged. Pollen indicated that the surrounding landscape was dominated by open woodland with some grassland nearby. Analysis of the wear patterns on the flint tools betrayed their use for butchering meat, hide-scraping, and woodworking. A waterlogged deposit at Lion Point, Essex, preserved the end of a yew wood point that had been shaped with flint tools and hardened in a fire. It was probably a spear-tip, a thrusting weapon rather than a throwing weapon, although it could have been a part of a digging stick or a snow probe.

A rather similar type of site is known south of the Thames at Swanscombe, Kent. Here deposits known locally as the ‘lower gravels’ contain distinctive Clactonian-type artefacts, probably from a campsite in the vicinity again situated beside a river. In contrast to Clacton, however, pollen suggests that here at Swanscombe reed swamps, fen habitats, and light woodland surrounded the site, thus providing a slightly different potential range of resources. The animals available to the occupants of the Swanscombe area at this time included straight-tusked elephants, fallow deer, horse, wild ox, red deer, and rhinoceros. Other Clactonian findspots include Little Thurrock, Essex, and Barnham St Gregory, Suffolk, which were again in waterside locations. It is notable that no Clactonian tools have so far been recorded from occupation layers within caves, and that the distribution of sites is mainly confined to eastern parts of Britain.

### ***Acheulian occupation***

Riverside and lakeside locations also attracted Acheulian communities, no doubt for the same reasons as the users of Clactonian industries favoured them, but caves were also sometimes exploited for habitation by Acheulian groups, as at Kent’s Cavern, Torbay, although dating some of these early deposits and determining their cultural affinities can be extremely difficult. At Fordwich, Kent, for example, many tools have been recovered from gravels beside the River Stour, but whether they all derive from a single occupation area is not known. Other waterside sites with handaxes of this period include Stoke Newington, Hackney, in London; Hitchin, Hertfordshire; and Foxhall Road in Ipswich, Suffolk. At Elveden, Suffolk, excavations in 1995–9 revealed human activity around the edge of a shallow river basin dated to OIS 11, including the manufacture of handaxes and other kinds of tool.

The Thames Valley has yielded abundant traces of occupation of this period, although most of the evidence is contained within disturbed glacial drift deposits. Taking the distribution of known sites as a whole there seems to have been a preference for situations near the confluence of rivers, as for example in the middle Thames, and further west where the Bristol Avon meets the River Severn. Swanscombe, in the lower Thames Valley, is an important site throughout the Hoxnian stage. Above the early Clactonian industries in the ‘lower gravels’ is an Acheulian

industry which is probably of middle or late Hoxnian date. Environmental evidence suggests relatively open conditions, and horse and aurochs were the main animals hunted. The number of flint flakes worked as tools at Swanscombe was less than at Hoxne, perhaps reflecting a slightly different range of activities at the two sites. Most importantly, the Acheulian levels at Swanscombe have yielded three fragments from the skull of one of its inhabitants. It is difficult to say much from the pieces found because they all derive from the rear of the skull, but Chris Stringer suggests that they belonged to an adult female, some of whose physical characteristics suggests she was in some ways ancestral to Neanderthal populations (see below).

Further north, in East Anglia, the site of Hoxne, Suffolk, which gives its name to the interglacial as a whole, has two distinct levels of Acheulian occupation. The site lay beside a lake at this time and the earlier level is characterized by a tool assemblage made using fine-quality black flint and dominated by refined cordate/ovate handaxes. Products of the Hoxnian period and later were finished by flaking with a soft hammer which produced a much more regular finish than is found on very early Acheulian tools. Bones from the site suggest that horse was the principal animal hunted or scavenged, with deer, bison, aurochs, and elephant present in lesser numbers. Analysis of the tools showed that butchery, woodworking, and plant processing were practised at or near the camp. Stratified above this industry was a second artefact-rich level, rather different although still of Acheulian character, with mainly pointed handaxes and numerous scrapers found in discrete clusters suggestive of hide-cleaning.

The diversity of handaxe forms found at Hoxne raises important questions not just about the range of possible uses but also the thoughts that went into their design and production. Certainly there are chronological considerations and it is not surprising that over tens of thousands of years there should be a gradual change in preferred shapes. But is there more to these forms than meets the eye? Mark White thinks not, and suggests that the ultimate shape of an implement depends almost wholly on the nature and quality of the raw material available to the knapper. Others disagree, and look to the results of work in the field of evolutionary psychology for help. The fact that handaxes were made in vast numbers, that some were exceptionally well-made and rather beautiful, and that care was taken over the selection of suitable raw materials suggests that issues of status and quality may be part of the equation. In a few cases handaxes are unfeasibly large: an example from Furze Platt, Windsor and Maidenhead, is 32cm long suggesting that size mattered here. Indeed, Marek Kohn and Steven Mithen have suggested that handaxes were integral to sexual selection strategies and were used as reliable indicators of the quality of potential mates by those of the opposite sex.

At both Hoxne, Suffolk, and Marks Tey, Essex, there is evidence for a period of deforestation and the deposition of charcoal in the vicinity of each site at about the same time that human groups arrived. Possible explanations of this must of course include natural disasters such as lightning strikes, but another suggestion is that human groups were deliberately interfering with nature by setting fire to the forest, perhaps to encourage the growth of new shoots and scrub which would attract herds of animals and so make sources of food more predictable. Whether or not this is so, the skill of these early hunter-gatherer groups in exploiting the environment in

which they lived should not be underestimated. They undoubtedly had a deep knowledge of their surroundings and the behaviour of their prey. To judge from hunter-gatherer societies recorded in modern times, hunting strategies were complicated, well-coordinated, and steeped in ritual, ceremony, and appeals to supernatural magic powers.

Waterside sites were not the only places occupied during the Hoxnian. Acheulian-type handaxes have been found on high ground over 100m above sea level on the Chilterns, in north Hampshire, on the Wiltshire Downs, and on the Cotswolds. Coastal sites may also have been used to exploit marine resources, as at Slindon, Sussex, occupied after a phase of high sea level, and also because of abundant supplies of fresh flint following cliff falls.

## WOLSTONIAN COMPLEX

The period from about 360,000 BC down to about 130,000 BC is traditionally seen as a glacial period, but oxygen isotope studies show that in fact it comprised three cold spells (OIS 10, 8 and 6) separated by two warmer periods (OIS 9 and 7). Human occupation continued traditions established during the Hoxnian, and some sites such as Hoxne itself might have been used through part or all of OIS 10 and 9. It was also during this time that a new mode of flintworking became fashionable, the so-called 'Levallois' technique. The aim was to remove flakes of a pre-determined size and shape, and this was accomplished by first preparing a block of flint as a core by surface flaking one face to produce what is often rather aptly called a 'tortoise core'. Once this was done flakes could be detached along the axis of the core, each flake retaining a distinctive pattern of converging surface flake-beds on its back or dorsal face.

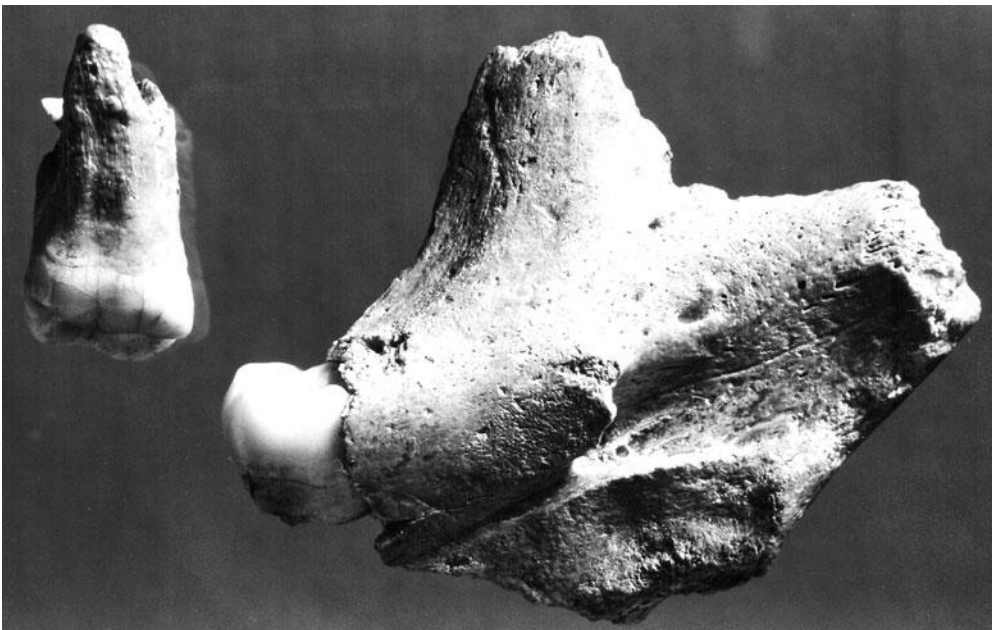
Traditionally, relatively few sites dating to the Wolstonian are known compared with earlier times, but recent discoveries and the re-investigation of earlier collections are filling out the picture. At Pontnewydd, Flintshire, a cave in the uplands of North Wales overlooking the Elwy Valley, excavations by Stephen Green between 1978 and 1980 revealed two main phases of activity dating to between 230,000 BC and 170,000 BC in OIS 7, although subsequent disturbance at the site makes interpretation difficult (11). Settlement was apparently confined to the entrance area of the cave, and tools included handaxes and scrapers of late Acheulian type made from local rock. Green suggests that the evidence recovered is compatible with the use of the cave for transitory settlement, probably as part of a hunting strategy, in which local raw materials were used for the production of *ad hoc* toolkits. Human bones, including 17 teeth and thought to represent the remains of at least five individuals – three children, a young adult, and a mature adult – were found in the upper layer. Genetically, they belong to the hominin species *Homo sapiens neanderthalensis* and at present represent the only certain Neanderthal remains from Britain, although later examples have been found at La Cotte de Saint-Brelade, Jersey, in the Channel Islands.

Another important site of this period is an open campsite in the lower Thames Valley at Baker's Hole, Northfleet, Kent, which demonstrates the presence of groups in Britain during a very cold period within the Wolstonian (?OIS 8). Almost limitless supplies of good-quality flint

A



B



**Figure 11** Pontnewydd Cave, Flintshire. A: Excavations inside the cave in progress. B: Hominin bones: adult molar and a fragment of a juvenile mandible. [Photographs courtesy of Stephen Green (National Museum of Wales). Copyright reserved]

in the area might have been one of its attractions, but proximity of hunting grounds was also no doubt important. North of the Thames the site of South Woodford, Redbridge, discovered during the construction of the M11 certainly seems to have been connected with hunting as use-wear analysis of the handaxes recovered suggests heavy-duty carcass processing. Further south another site is Red Barns near Portchester, Hampshire, where excavations in 1975 revealed a substantial assemblage of flintworking debris suggesting a tool-production site where handaxes were manufactured from locally available flint (12). Flintworking was also a feature of a site at West Thurrock, Thurrock, in the lower Thames Estuary where points were being produced using the Levallois technique. Activity on higher ground is represented at Harnham, Wiltshire, where 44 handaxes, roughouts, and hammerstones attest flintworking on the chalk downlands of central southern England. By the end of OIS 8 the Levallois technique was becoming increasingly widely used, and the composition of most toolkits had changed to what are known as Mousterian industries.



**Figure 12** Acheulian flintworking floor of the Wolstonian glacial period under excavation at Red Barns, Portchester, Hampshire. A: General view of the excavation showing the depth of glacially deposited overburden sealing the floor, scale totals 2m. B: Detail of part finished tool and flintworking debris on the working floor, scale totals 20cm. [Photographs courtesy of Clive Gamble and Arthur ApSimon. Copyright reserved]

### ***Mousterian industries***

The Mousterian is named after the type-site of Le Moustier (Dordogne), France. Assemblages are common over much of Europe and the Near East where they are closely associated with Neanderthal communities. They are dominated by tools made on flakes and blades and usually include an abundance of Levallois working. Handaxes are also present. As yet there are no associations between Mousterian assemblages and human remains in Britain making it impossible to say whether communities using Mousterian style toolkits made their way into Britain in pursuit of animal herds, or whether the traditions were adopted by existing communities as suggested by the evidence of Pontnewydd discussed above. John Wymer has emphasized how few substantial Mousterian assemblages are known from Britain, citing one from Great Pan Farm, Newport, Isle of Wight, with about 50 handaxes that can tentatively be dated to OIS 7, and material from the rock-shelter at Oldbury, Kent, with at least 5 handaxes and 11 Levallois flakes.

### **IPSWICHIAN STAGE**

During much of the Ipswichian Stage, the period 130,000 BC to 115,000 BC (OIS 5e), Britain was probably an island, cut off from the Continent, seemingly with occupation confined to the beginning and end of this interglacial. Why this should be so when isolation from the Continent did little to limit occupation in earlier times is unclear. The climate was for much of the time as warm as today, and deposits rich in animal remains have been found at Bobbitshole near Ipswich, Suffolk, and under Trafalgar Square, Westminster, in central London. The fauna living beside the Thames here more than a 100,000 years ago included lions, hippopotamus, straight-tusked elephant, rhinoceros, giant deer, red deer, fallow deer, aurochs, and bison.

### **EARLY DEVENSIAN STAGE AND THE APPEARANCE OF MODERN HUMANS**

The early Devensian, from about 115,000 BC to 20,000 BC (OIS 5a–d, 4 and 3) was a fairly temperate period with falling sea levels that allowed reconnection with the continental mainland and clear evidence of recolonization, presumably by Neanderthal communities since Mousterian industries predominate, sometimes with marked similarities to Acheulian industries and therefore known as Mousterian or Acheulian assemblages. Mark White and Roger Jacobi have shown that one of the distinctive tool-types introduced to Britain by recolonizing Neanderthal groups is the so-called *bout coupé* style of handaxe with a characteristic U-shaped outline, wide slightly convex blade, and broad butt. Early sites with these kinds of toolkit include several of the caves in Creswell Crags (Robin Hood's Cave and Pin Hole Cave), Derbyshire, as well as Kent's Cavern, Torbay, and Uphill Quarry, North Somerset. Finds from Coygan Cave, Carmarthenshire, include fine *bout coupé* handaxes from the very end of their currency, perhaps as late as 38,000 BC.



Although caves were widely used for occupation through the early Devensian, open sites were far more numerous if only because of the geographically restricted distribution of caves. Mammoth-hunting was widespread at this time, and the development of the Levallois flaking technique to allow the manufacture of flint points that could have been used as spear-tips may be linked with the increasing exploitation of this species. At Ealing in west London a pointed Levallois flake was discovered lying among the bones of what appears to have been a complete mammoth skeleton. Traditional methods and approaches were also used, and at Lynford Quarry near Mundford, Norfolk, excavations in 2002 revealed a butchery and carcass processing site dating to about 65,000 BC set beside a former river channel in an environment whose climate was colder than today with a mean July temperature of around 13°C. The remains of at least ten mammoths were represented as well as parts of medium-sized animals including reindeer and horse. Some had been hunted, others perhaps scavenged, but in all cases handaxes were the main tools used for dismembering the bodies.

Overall, the number of sites dating to the early Devensian is large, but spread over the enormous time period involved suggests that the population density was still low, perhaps fewer than a dozen groups spread across the whole country at any one time, and there might indeed have been times when Britain was unoccupied. The size of these groups is very hard to estimate. Hunter-gatherer societies are often very fluid, with fissioning or partitioning of the community at times when resources are scarce followed by fusion or the coming together of groups into maximum units or bands when circumstances permit, possibly on a yearly cycle. Local bands cannot have fallen below about 25 members since this is the minimum number required to maintain a viable reproductive population. At all times, group size and dispersion must have been governed by the resources available and what could be exploited.

No evidence of structures or dwellings of this date are yet known on open sites, but they would probably have been simple wooden or hide-covered shelters. Group territories defined in terms of the annual cycle of movements may have covered very large areas, and communities staying in southern Britain from time to time may have been just as familiar with large areas of the Rhine Valley as with the Thames Valley. Whether communities penetrated the uplands of northern and western Britain is not known. No artefacts or sites have so far been recorded from these areas, but this could simply be a product of uneven preservation rather than evidence of a real preference for the hunting grounds of southern and eastern England as an extension of the north European Plain.

### ***Moderns arrive in Britain***

By about 40,000 BC anatomically modern humans (AMH), *Homo sapiens sapiens*, or ‘moderns’ as Clive Gamble calls them, were present in Europe and undoubtedly appeared in Britain during the middle stages of the Devensian. Two models have been put forward to account for their spread across the planet: local parallel evolution which for northern Europe would imply an

origin among indigenous Neanderthal populations; and the ‘out of Africa’ scenario whereby AMH developed from *Heidelbergian* populations in the equatorial zone between 200,000 and 160,000 years ago before colonizing other areas as a single wave of advance starting about 100,000 years ago. The second model best fits currently available genetic evidence and the dating of AMH colonization, and is now widely accepted. By implication, AMH communities moving into northern Europe must have encountered aboriginal Neanderthal peoples and for a time at least lived side by side. What exactly was the fate of the Neanderthals remains uncertain, but João Zilhão has argued that some must have integrated with, and been absorbed into, AMH communities.

Archaeologically, the arrival of AMH bands is marked by the appearance of new flintworking technologies and the start of a succession of distinct but fairly short-lived technological traditions that may well represent identifiable cultural groupings both adapting to their environment and expressing a common identity. Roger Jacobi has argued that these changes broadly follow patterns of development evidenced on the Continent, and that we cannot and should not separate developments in Britain from those in adjacent areas. Particularly noticeable in this regard is an expansion in the range of items in the average toolkit, and a new focus on specialized equipment. Handaxes, which had been in use for the previous 500,000 years or more in Europe, were finally replaced by a range of tools adapted to specific tasks. Rather distinctive was the blade-based technology that replaced an earlier reliance on flakes. Blades are long narrow flakes, generally defined as being at least twice as long as they are wide, and in the middle Devensian they were detached from elongated cores using a soft hammer or punch. One of the most widely recognized new tool forms to appear at this time was the ‘leaf-point’ or ‘blade-point’. These are large, usually 10–15cm long, and shaped by carefully executed surface chipping on both sides of the blade (bifacial working) probably to form tips for wooden spears. A collection of 36 leaf-points recovered during house-building at Pulborough, West Sussex, in 1990 is one of the largest collections so far known in Britain and represents the remains of a substantial hunting camp situated so as to exploit the extensive views across the western Weald. End scrapers and bruins were also present, the whole collection showing connections with what Roger Jacobi has defined as the Lincombian-Ranisian-Jerzmanowician technocomplex of flintworking industries found over a wide province in northern Europe from the Netherlands through to Poland. Slightly later worked flints are closely paralleled by the Aurignacian points of France and the Low Countries, reinforcing the generally south-eastern origins of Britain’s AMH populations which may well have arrived as part of what William Davies defines as a wave of dispersals in the period 37,000 BC to 29,000 BC.

Fewer than two dozen sites can confidently be assigned to the mid Devensian, and of these most are caves in Devon, the Mendips of Somerset, Wales, and the southern Pennines round Creswell Crags in Derbyshire. Open sites do exist, as at Barnwood, Gloucestershire, in the Severn Valley, but they are scarce. Perhaps this is not unexpected at a time of deteriorating climate and in light of the widespread destruction of sites by the action of later ice sheets. In almost all cases, however, the known sites show repeated periodic occupation with a few items reflecting

A



B

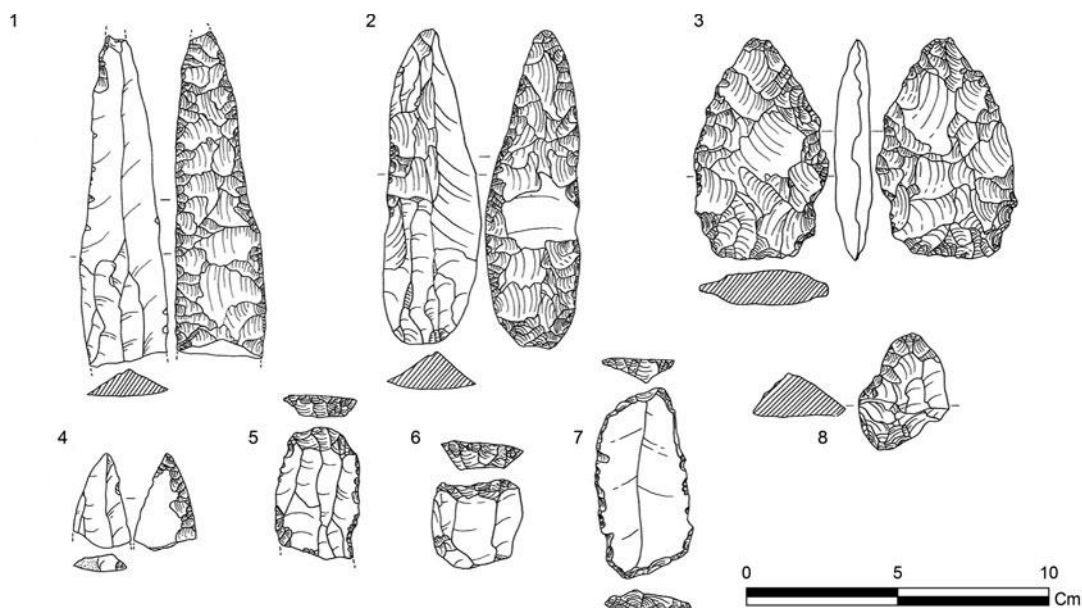


**Figure 13** Kent's Cavern, Torbay. A: Excavations in progress in Wolf Cave where evidence of hyena denning was found. B: Detail of cave deposits dating to the middle Devensian (?OIS 3) containing a gnawed rhino long bone, a rhino tooth, and a horse tooth. Scale totals 30cm. [Photographs courtesy of Paul Pettitt and Mark White. Copyright reserved]

successive traditions – leaf-points, Aurignacian, Gravettian – but the stratigraphy is generally so poorly preserved that understanding activities within particular horizons is impossible.

Kent's Cavern, Torbay, was one of the cave sites occupied in the mid Devensian, probably about 28,000 BC according to radiocarbon dates from bones loosely associated with flint tools from the site (13). Many leaf-shaped points were found in the Great Chamber, together with animal teeth, which might, as John Campbell has suggested, indicate an area in which tasks connected with the dismemberment and butchering of carcasses brought back by hunting parties were carried out (14). The presence of hyena bones suggests that humans were not the only inhabitants of the cave, and for this reason it is difficult to be certain which of the great many animals – horse, woolly rhinoceros, deer, bison, and great Irish elk – whose bones were found fed humans and which were brought to the cave by hyena.

Comparable with Kent's Cavern is the site of Badger's Hole, on the Mendips, Somerset. This site was probably a base-camp, but round about are other caves of the same period with markedly less artefactual material. This may suggest that they were used as temporary shelters by hunting parties working their way across the Mendip uplands and is perhaps the first evidence for a functional difference between sites. Analysis of pollen from the Hyaena Den Cave, on the Mendips, indicates a fairly open environment at this time with a high proportion of grasses and herbs and a few willow and juniper bushes interspersed between occasional pine, oak, and lime trees. One of the great problems with this early period of prehistory is, however, assessing the



**Figure 14** Selection of equipment and objects from middle Devensian deposits in Kent's Cavern, Torbay. 1–4: leaf-shaped points; 5–8: scrapers. [After Megaw and Simpson 1979, fig. 2.4]

contemporaneity of adjacent findspots and matching evidence recorded at one site with that from others.

Burials of mid Devensian date are extremely rare according to present evidence, but one, the so-called 'Red Lady of Paviland', discovered in Goat's Cave at Paviland on the Gower, Swansea, in 1823 by William Buckland, has attracted much attention. In fact the burial is that of an adult male aged 25 to 30 at death. Originally standing 1.74m tall he had been sprinkled with red ochre after being placed in a shallow grave within the cave (15). The body seems to have been deliberately associated with the skull of a mammoth, and accompanying the interment were a number of mammoth ivory rods, two ivory bracelets, and some perforated shells. This burial, which represents the oldest known formal burial in Britain, has been dated to about 31,000 BC (OxA-8025: 25,840±280 BP), confirming an earlier suggestion by Roger Jacobi that the burial belongs with the occupation of the cave. Human bone relating to an AMH from Kent's Cavern, Torbay, is broadly similar at about 32,000 BC (OxA-1621: 30,900±900 BP), and it is notable that flintwork from these two sites is also very similar.



**Figure 15** The Red Lady of Paviland. Reconstruction drawing of a burial ceremony in Paviland Cave, Swansea, c.29,000 BC. [Drawing reproduced courtesy of the National Museum of Wales. Copyright reserved]

## **LATE DEVENSIAN DISCONTINUITY AND BRITAIN'S LAST ICE AGE**

After about 25,000 BC the effects of the Devensian glacial advance were being felt throughout Britain, and for nearly 15,000 years thereafter arctic conditions prevailed (OIS 2). Northern areas were covered by ice, and by about 18,000 BC the ice cap had penetrated as far south as the Bristol Channel and across England and Wales along a line drawn roughly between Swansea and the Wash. South of this line periglacial and tundra conditions obtained.

There are virtually no traces of occupation in Britain from this time of maximum glacial advance, nor indeed from northern France which was connected by land to southern England throughout the late Devensian. However, the possibility of occasional forays northwards from densely settled parts of France further south, for example along the Dordogne, cannot be ruled out. After 15,000 BC the ice started to retreat and relative sea levels slowly began to rise: north-west Europe's great flood which would eventually create the landscapes and seascapes that we see today had begun.

# 3

## TALES FROM TOPOGRAPHIC OCEANS

### Post-glacial hunter-gatherers 13,000–4000 BC

The ice caps of the last main episode of glaciation were in retreat from 15,000 BC, and by 12,000 BC all of southern Britain together with much of what is now the North Sea and English Channel was available for settlement. At the last glacial maximum sea level was low, perhaps 30m below its present level. But as global warming took hold and the ice sheets melted things changed. Glacio-isostatic rebound in the earth's crust occurred as the weight of overlying ice declined, and hydro-eustatic adjustment prompted by increasing amounts of water in the world's oceans, combined to cause differential rises in relative sea level around the edge of Atlantic Europe. In the far north-west of Britain, where ice had been especially thick, depressed landscapes rebounded quicker than water levels rose so that ancient beaches and wave-cut platforms now stand well above sea level. Further south and east rising water levels coupled with sinking landscapes led to the flooding of a huge area of land christened Doggerland by Bryony Coles to form what is now the North Sea.

This transition between the Devensian glacial stage and the Flandrian interglacial stage in which we now live was not a single smooth process. Several re-advances and retreats in localized ice caps can be identified, with associated climatic fluctuations and a constantly changing pattern of available flora and fauna for people to exploit. Not surprisingly, as the environment changed, so too did the technologies, preferred ranges, and subsistence practices of the human communities who initially visited the area and then settled it. Thus between about 13,000 BC and 6000 BC when Britain again became an island there is a succession of six more or less distinct cultural traditions, each with connections eastwards or southwards deep into the European mainland. Matching these cultural traditions to established geological epochs (Pleistocene to Holocene), geostatigraphic stages (Devensian to Flandrian), and biostratigraphic divisions and climatic phases (Oldest Dryas through to Boreal within OIS 1) is far from easy. Absolute dating holds the key, but it is only since 2005 that the calibration of radiocarbon ages for these early periods has

become possible and the complex picture of human adaptation to relatively fast-changing environmental conditions started to become clear.

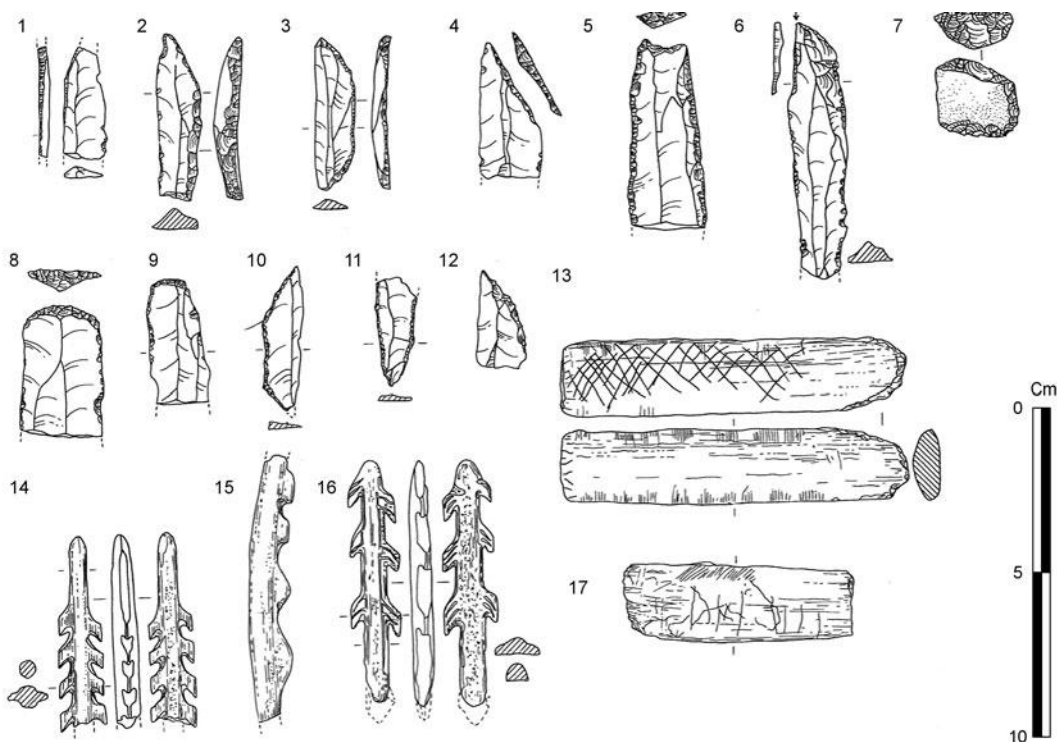
## **POST-GLACIAL RESETTLEMENT: CRESWELLIAN/MAGDALENIAN AND HAMBURGIAN COMMUNITIES**

Climatic deterioration during the Dimlington cold phase, also known as the Oldest Dryas, between about 17,000 and 13,000 BC led to the development of a tundra environment (Pollen Zone 1a). This was followed by a warmer phase, the Bølling, characterized by the spread of birch-dominated woodland (Pollen Zone 1b). It was at this time that herds of elk, horse, reindeer, red deer, and many other small animals moved back into northern France and Britain from their southern retreats to join existing populations of large mammals or *megafauna* such as mammoth, bison, woolly rhinoceros, and lion accustomed to living in a periglacial environment.

Anatomically modern humans whose distant ancestors had hunted here before the Devensian glacial maximum also moved back into north-west Europe following the animals on which they depended. Detailed analysis of the radiocarbon dates associated with the activities of these post-glacial colonizers suggests that it was a dynamic socially driven process in two phases. As early as 13,000 BC pioneer groups perhaps on short-term expeditions hunted in the British peninsula. Mammoth were especially suited to the expanding steppe-like conditions at the time, but their post-glacial presence in Britain was short-lived and they soon became extinct, probably through over-hunting. The adult and three juvenile mammoths found in a quarry at Condover, Shropshire, in 1986, died sometime around 13,000–11,870 BC (OxA-1316: 12300±180 BP) and were probably among the last of their kind living in Britain. In the second phase, starting around 12,500 BC, a more sustained human population can be seen whose livelihood revolved around stalking reindeer, elk, and horse. In terms of British prehistory this second phase of resettlement is particularly significant because it marks the beginning of an unbroken period of occupation and continuous social development that is still continuing. Indeed, Stephen Oppenheimer has suggested more than 50 per cent of the mitochondrial DNA passed down through the female line now found in the gene pool of north-west European indigenous populations derives from migrants who arrived in the area in the early post-glacial period, most of them it seems from southern France and Spain.

Both the pioneer communities and those who followed in their tracks shared a late Magdalenian culture with people living southwards in what is now western France and northern Spain. Technologically, blade-based industries still predominated, but backed blades of various types appear for the first time (16). The characteristic leaf-shaped points of the mid Devensian (see Chapter 2) had been replaced by shouldered and tanged points (Cheddar Points made on bi-truncated backed blades and Creswell Points with distinctive angle-backed shapes), and steeply retouched awls, burins, and end scrapers had become common. These industries, collectively known as the Creswellian in Britain, were supplemented by greater use of bone and antler in





**Figure 16** Late Devensian (Creswellian) tools, weapons, and decorated bone. 1–6, 8, 11 and 12 from Anston Cave, Rotherham; 7, 9 and 13 from Gough’s Cave, Somerset; 10 from Langwith Cave, Derbyshire; 14 and 15 from Kent’s Cavern, Torbay; 16 from Aveline’s Hole, Somerset; 17 from Robin Hood’s Cave, Derbyshire. [After Megaw and Simpson 1979, figs. 2.10 and 2.11]

tool-making. Barbed uniserial or biserial points mounted on wooden shafts for use as harpoons and spears were important innovations, and bone was also used for awls and needles.

Initial resettlement favoured the same parts of Britain as had been used before the Devensian glacial maximum. Caves in the south-west, the Mendips, Wales, and the southern Pennines were again occupied at this time. But there was also a notable extension of settlement into the uplands of northern England.

One of the most southerly caves is Pixie’s Hole, Chudleigh, Devon, occupied around 11,790–11,320 BC (OxA-5794:  $11630 \pm 120$  BP), and discovered in the nineteenth century. Re-excavations by Simon Collcutt in 1976–9 reveal a living floor with a rudimentary hearth more than 12m from the entrance. More than 400 pieces of worked flint were recovered, including one Creswellian point, mainly utilizing raw material from within 6km of the site. Occupation seems to have been short-lived, perhaps during summer months, and focused on flintworking. There were no certain traces of hunting or butchery, but among the finds was a small pendant made by perforating a dark grey pebble.

Also in the south-west there was occupation in Kent's Cavern, Torbay, which seems to have continued its earlier role as the base for a hunting community. In the uppermost 'black band' in the entrance chamber the usual assemblage of backed blades and a uniserial bone point were found. Horse was the major prey of these hunters, along with giant Irish elk and perhaps cave bear.

By far the richest site in south-western England is Gough's Cave, in the Cheddar Gorge, Somerset. Over many campaigns of excavation this site, now a show-cave with public access, has yielded one of the largest collections of artefacts dating to the period between 13,848–12,958 BC (OxA-3413: 12940±140 BP) and 11,813–11,390 BC (OxA-2236: 11700±100BP) from anywhere in Britain. Floor-space and headroom inside the cave would have allowed a small group to spread out or sit round in a circle. In all some 2,200 items have been recovered, and Roger Jacobi interprets them as items left in the cave following the hunting and butchery of wild horses and red deer in summer and winter, an assemblage that built up incrementally over a long period perhaps as a result of use as shelter. Tools included classic Cheddar points as well as scrapers, piercers, burins, knives, and various retouched blades and flakes. Two examples of a rather unusual type of bone tool were found, known as *bâtons percés*. These are simply perforated bones which were probably used for straightening spear-shafts. Among the bones was a small amount from domesticated dogs, animals that are known to be associated with horse-hunting in this period elsewhere in Europe. Cut-marks on the animal bones show skinning, dismemberment, filleting, and the stripping of tendons and longer ligaments perhaps for use as thread or rope. Horse hooves were removed from the hoof-core presumably as part of the process of extracting glue from the keratin. Hideworking was shown by use-wear on some of the flint scrapers, while bone awls and a needle suggest the making or repair of clothing. Amber pebbles and seashells from the site hint at wide hunting ranges or exchanges with other communities. Human remains representing at least five individuals were intermixed with the animal bones and show similar cut-marks and break-ages suggesting nutritional cannibalism.

Further north a number of caves were occupied at this time along Creswell Crags, Derbyshire. Evidence from excavations in the mouth of Robin Hood's Cave provides some insights into the organization of the occupation area, with a hearth under the opening, and a meat-processing area at the rear. Nearby, at Mother Grundy's Parlour, pollen studies emphasize the changing environment during the late glacial occupations as the landscape hereabouts became covered in woodland dominated first by pine and then by birch. Further north still the Victoria Cave near Langcliffe, North Yorkshire (17), the Kirkhead Cave at Lower Allithwaite, Cumbria, and Lindale Low Cave, Cumbria, were also occupied by Creswellian communities but the deposits have become mixed by later activity; they would have been ideal camps for the summer exploitation of the Pennines and southern Lake District respectively.

A glimpse of the trauma of elk-hunting can be seen in a find made at Poulton, High Furlong, Lancashire, in 1970. Examination of the bones and associated artefacts allow the last weeks in the life of this creature to be reconstructed. It seems that during one winter sometime around 13,417–11,769 BC (OxA-150: 12400±300 BP) the beast was attacked, possibly with hard-tipped



**Figure 17** Victoria Cave near Settle, North Yorkshire. [Photograph: Timothy Darvill. Copyright reserved]

projectiles and a chopper of some kind; wounds were inflicted on the limbs and rib cage. The animal escaped alive but three weeks or more later was attacked again, this time with spears tipped with uniserial bone points. One tip lodged in the left hind foot, another in its flank. Again the animal escaped, badly wounded, but seems to have died shortly after while crossing a marshy lake.

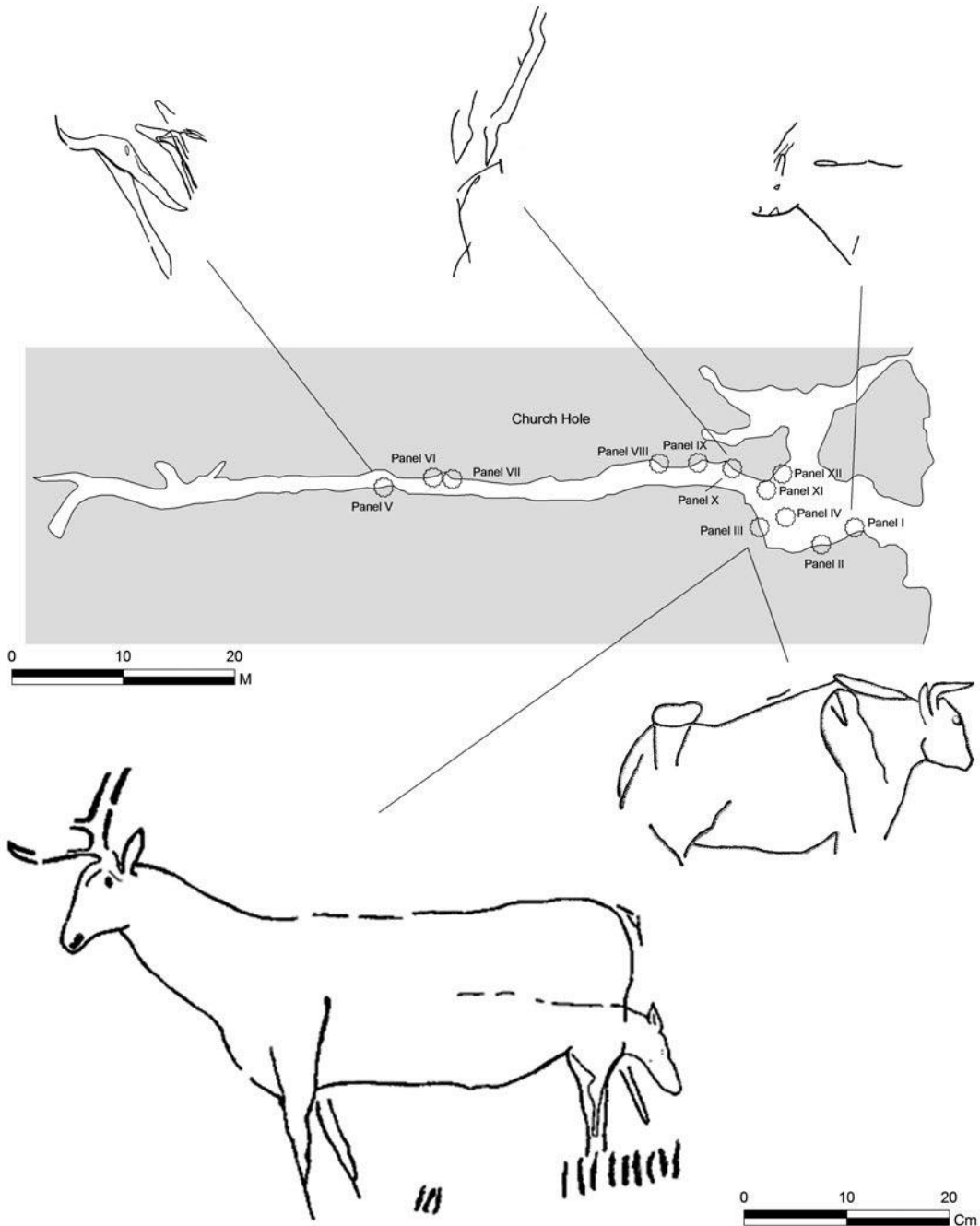
The Poulton find is not unique. Similar discoveries have been made at Sproughton, Suffolk, and comparable bone points have been found at Gransmoor, East Riding of Yorkshire, Porth-y-Waen, Shropshire, and Kent's Cavern, Torbay. Across lowland areas of eastern and southern Britain there must have been numerous open settlements; known examples at Mildenhall, Suffolk, Oare, Kent, and Walton-on-the-Naze, Essex, suggest widespread if low-density occupation that can be hard to recognize. However, bearing in mind that sea levels were still low at this time a great deal of activity must be expected around the lakes and river valleys that punctuated Doggerland, a view confirmed by occasional finds such as those from the Leman and Ower Banks 40km north-east of the Norfolk coast brought up by fishing nets from a depth of 39m from the floor of the North Sea, and detailed three-dimensional imaging of the southern North Sea by Vince Gaffney and colleagues at Birmingham University who have mapped the topography of these ocean floors and located a number of possible submerged settlement sites.

The earliest known art in Britain is associated with these Creswellian communities and although confined to a few pieces of incised bone and engravings on the walls of caves it is clear that the inspiration behind the designs links these traditions with the famous cave paintings in southern France and Spain. Among the first items to be discovered were the *bâtons percés* made of red deer antler bearing incisions, the incised tibia of a mountain hare, fragments of mammoth ivory with incisions, a scraped rib-bone, and a worked amber pebble from Gough's Cave, Somerset. Two of the *bâtons* and the rib-bone have groups of cut-marks along their edges as if the bones had been used as a tally of some kind. Various possible uses have been suggested, among them the idea that the bones were calendrical records.

By far the richest collection of decorated material comes from caves along Creswell Crags, on the Derbyshire–Nottinghamshire border. Among the early finds here were a rib-bone bearing the engraving of a horse from Robin Hood's Cave, an ivory point carrying a fish design from Pin Hole Cave, and from the same site a reindeer rib on which is portrayed a masked figure. These were impressive enough, but in April 2004 engravings were recognized for the first time on the walls of a narrow cave at Church Hole on the south side of Creswell Crags (18). At least 12 panels have now been identified, mostly towards the outer sectors of the cave, and include images of a red deer, a bison, another herbivore, birds, and perhaps two human vulvas. Dated bone from the cave spans the period 13,500–11,600 BC while stylistically there are obvious similarities with the Magdalenian cave art of France and eastern Spain. An engraving of a vulva putatively of the same date has also been reported from Robin Hood's Cave.

Human bones have been found scattered among deposits in two caves in Somerset – Gough's Cave where they have been dated to between 12,960–12,080 BC (OxA-2796: 12380±110 BP) and 11,960–11,220 BC (OxA-2234: 11480±90 BP), and Sun Hole where they date to 12,870–11,810 BC (OxA-535: 12210±160 BP) – no formal burials associated with Creswellian communities have yet been found in Britain.

Overall, although the number of recognized Creswellian occupation sites has increased in recent years, the scale of occupation at this time was small. Lawrence Keeley suggests that Creswellian communities were 'simple hunter-gatherers', characterized by short-term residence



**Figure 18** Early post-glacial Creswellian cave art in Church Hole, Creswell Crags, Derbyshire, showing the position of recorded rock art panels and selected motifs. [After Ripoll *et al.* 2004, figs. 2, 4, 6, 8, 10 and 11]

at chosen sites, low populations relative to the carrying capacity of the environment, and had little reliance on stored food.

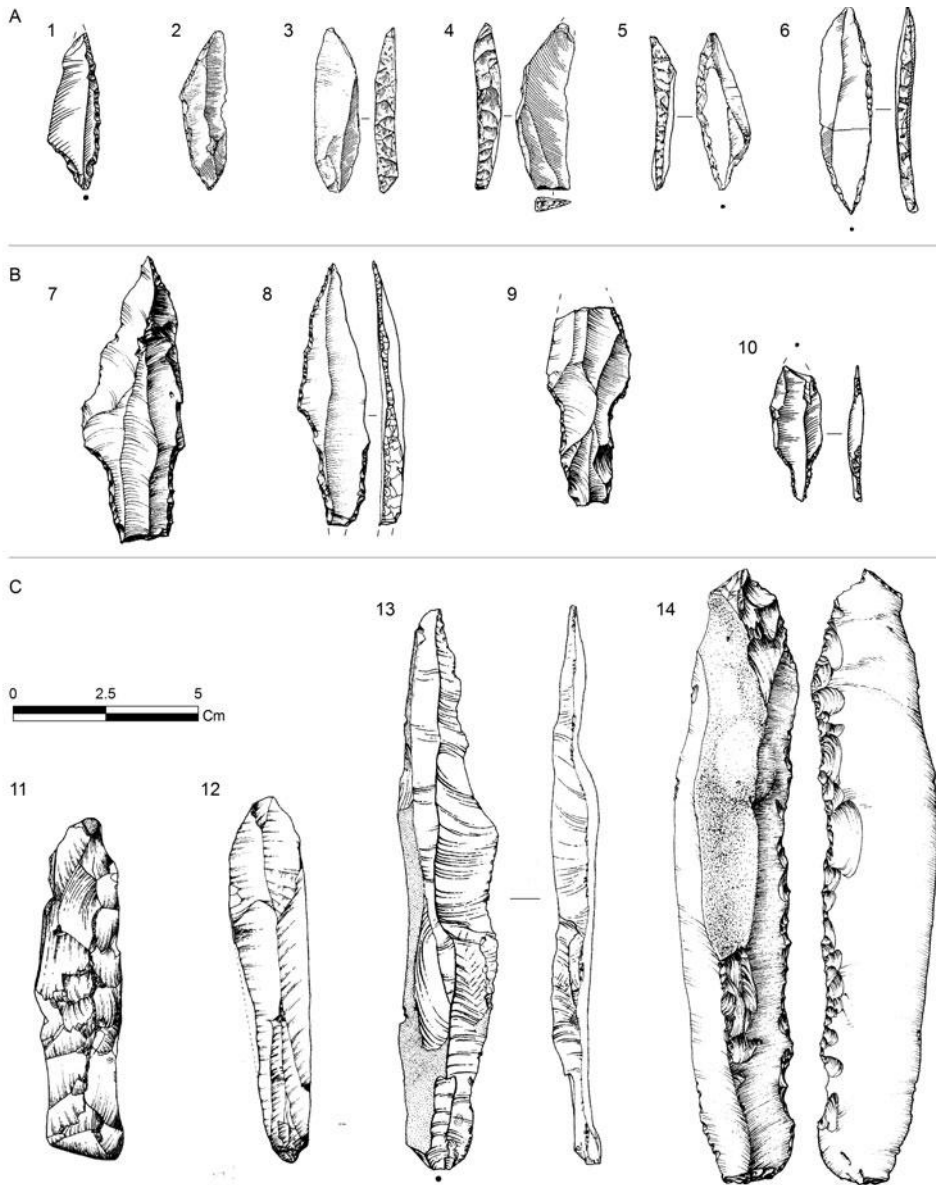
In the later thirteenth millennium BC, between 12,500 and 12,000 BC, the climate seems to have deteriorated during the Older Dryas biostratigraphic division, also known as the Windermere cold phase (Pollen Zone 1c). The landscape became more open and tundra-like with available fauna dominated by reindeer herds that naturally became the main food-source for hunter-gatherer groups. Technological adaptations involved the development of new hunting weapons characterized by finely worked curved backed points recognized as the Hamburgian tradition of the north European Plain. One very fine tanged point comparable with the Hamburgian industries in the Netherlands, North Germany, and southern Denmark was discovered among an assemblage of worked flints from Howburn Farm at Elsrickle, South Lanarkshire, in central Scotland, a discovery that shows just how far north hunter-gatherer groups reached during this cold snap.

### **FEDERMESSERGRUPPEN COMMUNITIES 12,000–11,000 BC**

The early twelfth millennium BC saw further environmental changes with the development of a relatively warm phase, known as the Allerød (Pollen Zone II), when summer temperatures averaged 14.5 degrees centigrade in southern Scotland, higher in southern Britain. Elk, reindeer, and giant fallow deer were present and over a period of about a thousand years a relatively rich and diverse open landscape developed with areas of heath, dwarf shrub, and grassland associated with juniper, willow, and birch.

The main technological development at this time was that of the flint ‘penknife point’ made on a fairly broad blade with a straight unworked edge along one side, a curved distal end, and a lightly retouched edge parallel to the unworked side (19A). These penknife points were probably used to tip projectiles that could be shot from a longbow, and it is significant that during this period bows and arrows first make a significant contribution to hunting technology. The fundamental advantage of the bow is its precision, and in an increasingly wooded environment that could be important as space to manoeuvre without being detected by the prey is limited. Experiments show that arrows tipped with flint points shot from a 1.6m bow could penetrate and pass into a bear at 50m.

Penknife points have been found on more than 40 sites scattered across Britain south of the Lake District. Cave sites are common in the west, and include Three Holes Cave near Teignbridge, Devon, where two hearths associated with penknife points were dated to 12,877–11,874 BC (OxA-3208: 12260±140 BP); Mother Grundy’s Parlour, Derbyshire, with 21 penknife points from deposits dated to between 13,181–12,196 (OxA-4102: 12540±140 BP) and 12,057–11,739 BC (OxA-8738: 11970±75 BP); Pixie’s Hole near Chudleigh, Devon; and Symond’s Yat Rock-shelter, Gloucestershire. At Kendrick’s Cave on the Great Orme, Conwy, a decorated horse mandible dated to 10,436–8919 BC OxA-111: 10000±200 BP) probably belongs to this period but seems younger because of contamination in the dated material. Human bones from the cave date to around 12,193–11,816 BC (OxA-6114: 12090±90 BP), and of similar date



**Figure 19** Characteristic flintwork of the period 12,000–10,000 BC. A: Feddermessengergruppen penknife points and curved-back blades. 1 from Symond's Yat, Gloucestershire; 2–4 from Pixie's Hole, Chudleigh, Devon; 5–6 from Priory Farm Cave, Pembrokeshire. B: Ahrensburgien/Hengistbury points. 7–9 from Hengistbury Head, Bournemouth; 10 from Avington IV, West Berkshire. C: Bellosian long blades. 11 from Riverdale, Kent; 12–14 from Launde, Leicestershire. [After Barton and Roberts 1996, figs. 7 and 8; Barton *et al.* (eds) 1991, fig. 14.6; Collcutt (ed) 1986, figs. 17.1, 20.1 and 22.3; Cooper 2006, figs. 8 and 9]

are nine incised deer and aurochs teeth, as well as pieces of roe deer metacarpal, that had been stained with ochre and marked with short linear incisions.

### **AHRENSBURGIAN/HENGISTBURY COMMUNITIES 11,000–10,500 BC**

The warm Allerød phase continued through into the first half of the eleventh millennium BC (Pollen Zone II) as woodland increased in many areas, dominated by birch and pine, and the rich native fauna included elk, horse, reindeer, and giant deer. Technological changes can be recognized in the appearance of straight-backed blades and new styles of flint points, now tanged with straight-sided blades in a style well recognized across the north European Plain and associated with Ahrensburgian communities (19B).

Occupation sites of this period appear to be relatively rare in Britain, perhaps because recognizing them is less than easy. One of the best examples is Hengistbury Head Site I, Bournemouth, dated through thermoluminescence to before c.10,500 BC (OXTL-707a: 12500±1150 BP). The site now overlooks Christchurch Harbour and the English Channel but in early post-glacial times lay on a ridge overlooking a wide, probably wooded, valley containing the confluence of two rivers. The tools and flintworking waste recovered during excavations by Nick Barton in 1980–4 show that it was essentially a hunting and meat-processing camp, perhaps carefully chosen on a route regularly used by migrating animals and seasonally occupied during the spring and autumn migrations of horse and reindeer, but poor in flint as raw material had been transported to the site from at least 12km away.

Something of the density of sites in central southern Britain can be seen from the presence of a small settlement contemporary with Hengistbury Head I just 18km north in the Avon Valley at Nea Farm, Hampshire. A second open settlement, again with strong similarities to Hengistbury I, was excavated at La Sagesse Convent near Romsey, Hampshire, in 2001. Two flintworking areas dating to the period around 11,000 BC were revealed, one probably for primary shaping while the other was devoted to tool production. Both formed elements of a short-lived camp at a location chosen for its ready access to flint, water, and animal herds. Another similar site has been found at Brockhill near Horsell, Surrey.

A slightly different kind of occupation is represented in the Kennet Valley at Avington VI, West Berkshire, which has yielded one of the most convincing continental-type Ahrensburgian points so far known in Britain. Situated on the edge of the floodplain at a point where a small valley enters the main valley from the south, this short-lived occupation utilized local flint to make backed blades and microliths perhaps for re-tooling a hunting party.

Occupation certainly extended into northern Britain at this time as shown by the tanged point discovered in 1973 at Shildaig, Highland, on the north-west coast of Scotland, and others from Ballevullin on the Hebridian island of Tiree, Argyll and Bute, and Stronsay and Mainland, Orkney Islands. Broadly contemporary items have been dredged from Viking-Bergen between Shetland and Norway suggesting that occupation extended well to the north at this time. A Lyngby style



bone axe dated to 10,759–9461 BC (OxA-803: 10320±150 BP) was found in a gravel pit beside the River Nene at Earls Barton, Northamptonshire, in 1982. It is of a type commonly used in the lands between Poland and the Netherlands and serves to emphasize the wide spread of cultural connections at this time. The purpose of these axes is uncertain; some see them as tomahawk-like weapons, others as tools for breaking open skulls used in boneworking or antlerworking.

## **BELLOSIAN/LONG BLADE COMMUNITIES 10,500–10,000 BC**

A short-lived cold spell in the late tenth millennium BC caused the reappearance of ice sheets in northern Britain and Scandinavia, a period known as the Loch Lomond phase which corresponds with the Younger Dryas biostratigraphic division (Pollen Zone III). The cold conditions created more open landscapes with reindeer, arctic lemming, tundra vole, and ptarmigan commonplace. Along Doggerland's northern coast whales, seals, fish, and seabirds were presumably exploited. Technologically, the period is characterized by flintwork in the long-blade/bruised back blade traditions (*lames mâchurées*) that also show a geographical shift in cultural affinity from the eastward-derived Ahrensburgian to the southward connections with Belloy traditions focused in what is now northern France and the Low Countries (19C).

Relatively few sites yielding material of this kind are known, but they include Swaffham Prior, Cambridgeshire; Sproughton, Suffolk; Springhead, Kent; Riverdale, Kent; Avington VI, West Berkshire; Wawcott XII, West Berkshire; and Seamer Carr near Scarborough, North Yorkshire. Several open campsites of the period are known through recent excavations. At Launde, Leicestershire, a small camp dating to about 10,000 BC was excavated in 1996–7 during the construction of a water-pipeline. The site lies on a prominent ridge-top over-looking the Eye Brook and the River Chater and the recorded flint-scatter represents the hearthside activities of a small hunting group with evidence for the provisioning of flint, the production of small blades and bladelets, and toolkit maintenance. By contrast, a site excavated in west London in 1986–8 at Three Ways Warf, Hillingdon, lay in the bottom of the Colne Valley. Two occupations were recognized, the earliest dated to 10,635–9667 BC (OxA-1778: 10270±100 BP) which included flintworking debris in the long-blade tradition as well as the remains of horse, reindeer, and wild pig which were presumably hunted in the area. Like many sites of this period a later reoccupation was also recognized, here dated by thermoluminescence to 9370–5470 BC (OxTL-772f1: 8000±800 BP), and associated with red deer hunting by communities that are technologically and culturally best seen as Maglemosian.

## **MAGLEMOSIAN COMMUNITIES: WILDWOOD AND THE RISING SEA 10,000–6000 BC**

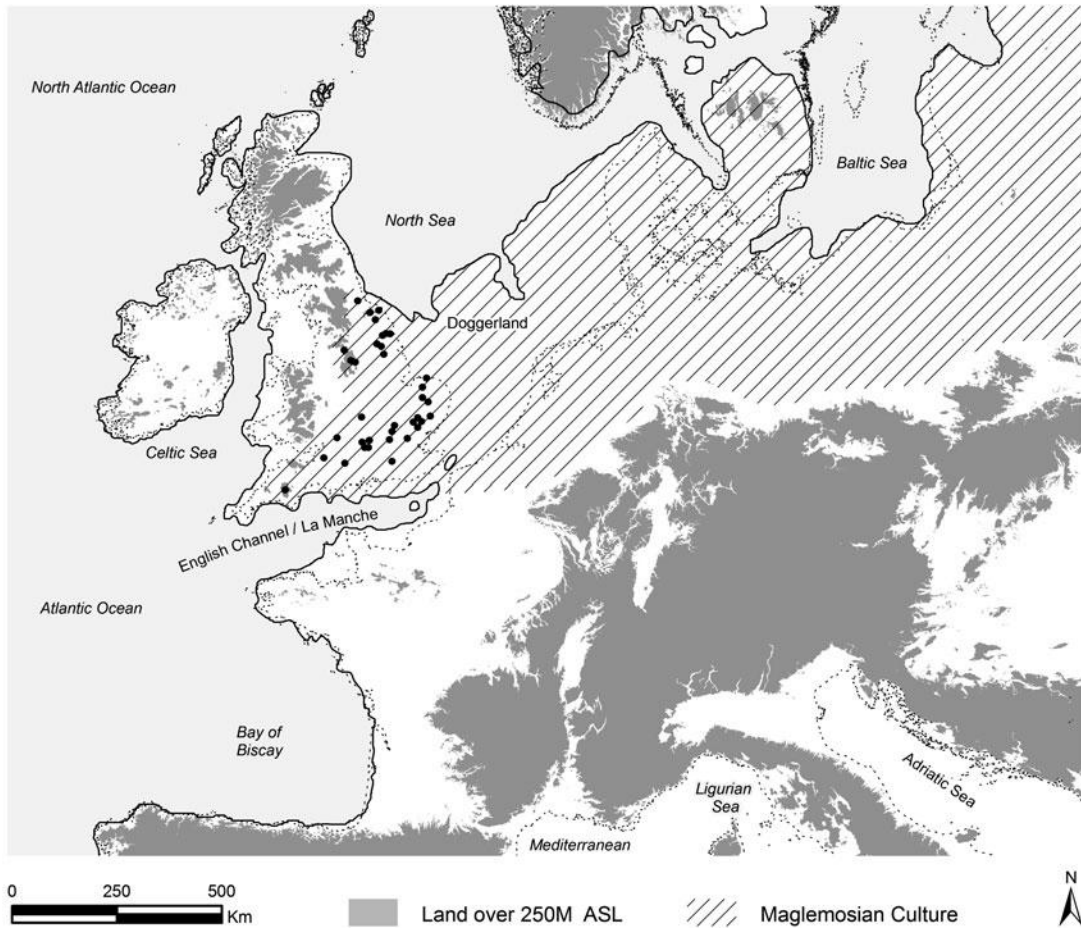
The Loch Lomond cold phase marks the end of the Devensian stage and the transition to the Flandrian stage, the Holocene in geological terms. Over the following four millennia the climate

generally grew warmer, soils began to mature, and the landscape became increasingly wooded as a succession of species came to prominence through the Pre-Boreal and early Boreal biostratigraphic divisions (Pollen Zones IV–V). The flora within these woods depended largely on soil type, for these were not managed woods but what Oliver Rackham has termed ‘wildwoods’: self-regenerative woodland which is highly variable in density and cover. Animals such as aurochs, red deer, roe deer and wild pig, which were all suited to woodland, could be found in lowland areas and would have provided plentiful supplies of food. Ruth Charles reminds us of the importance of pelts from fur-bearing animals such as brown bear, wolf, red fox, arctic fox, badger, pine marten, lynx, and beaver for making clothes and bedding.

In response to these changes hunting strategies and the equipment for procuring food were restyled. Uniserial bone points and tanged flint points continued to be made, but greater reliance was placed on composite tools made from small blade-based pieces known as microliths, set in wooden shafts. The microliths provided sharp tips or barbs for hunting weapons. Spears remained in use, but bows and arrows were now widespread for hunting within a woodland environment where the noise of closing in on an animal to use a spear might give alarm and cause it to escape. Another new tool type was the flaked flint or stone axe or adze, again useful in woodland for obtaining timber, general carpentry, and the construction of shelters. Antler mattocks were also made and used extensively for digging. All of these technological developments followed more general pan-European patterns for Britain was still very much a part of the continental mainland even though rising sea levels were reducing the scale of the physical connections. As far back as the 1930s, Grahame Clark recognized that communities in Britain were part of an exceedingly widespread grouping, known as the Maglemose Culture, that can be identified through its material culture over a vast territory extending from the eastern shores of the Baltic through north Germany, Denmark, and the Netherlands into the British peninsula (20).

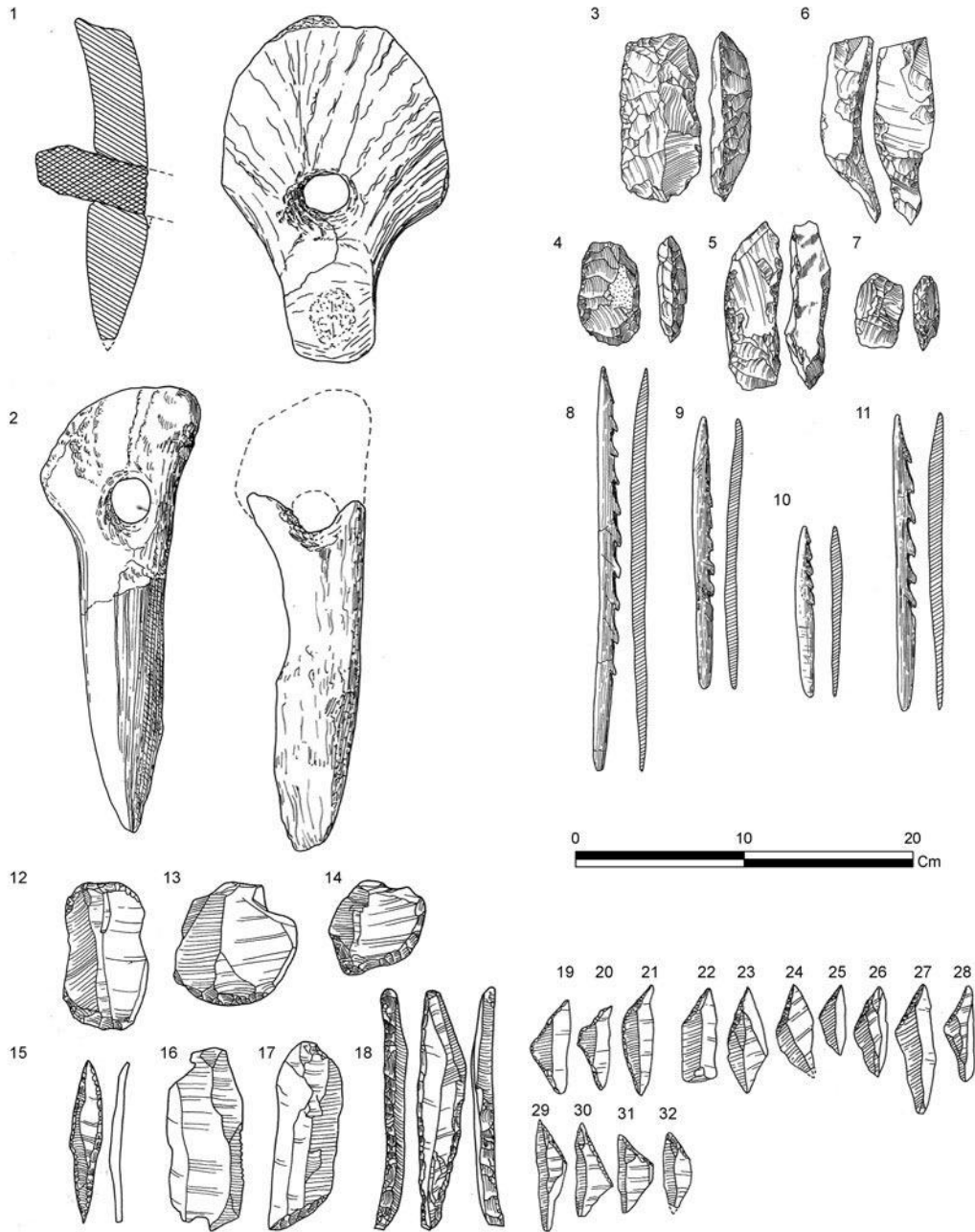
The majority of known occupation sites for the period 10,000 to 6000 BC are open camps. A few caves were used, but they account for rather less than 1 per cent of all known occupation sites. Riverside situations were favoured, presumably because of their diversity of plant and animal resources, the natural thinning of the woodland around such places, and the easy movements afforded by canoe along the rivers themselves. A few coastal sites are also known, but the biggest change was the spread of occupation into the uplands, in some cases well above the 305m contour.

One of the best-explored landscapes of this period is that around a former lake, Lake Flixton, in the Vale of Pickering, North Yorkshire. It was an area attractive to human settlement, within easy reach of terrestrial and aquatic resources, and with a good source of flint nearby. The area came to attention through excavations by Grahame Clark between 1949 and 1951 at Star Carr towards the western end of the lake. Because the site had been waterlogged and sealed by peat since its abandonment, preservation was exceptionally good (21). At the centre of the investigation was a birchwood platform that had been used as a workspace and may perhaps have formed a small jetty or landing stage at the edge of the lake. Hunting was represented by the bones of a variety of animals including red deer, wild pig, aurochs, elk, fox, wolf, and pine marten. Birds



**Figure 20** Map showing the north European land mass at about 9000 BC, with some of the main contemporary sites known in Britain and the spread of recorded Maglemosian Culture sites on the continental mainland. [After Clark 1972; Jacobi 1973, fig. 4; Clark 1936, map]

were also represented, among them crane, white stork, grebes, lapwing, and duck. Weapons found at the site included nearly 200 barbed antler points and over 240 microliths. Preservation was so good that one microlith retained traces of the resin which had been used to affix it into a shaft. Equipment for processing animal skins – scrapers, flint knives, and bone smoothers – was present, and debris from manufacturing barbed points from red deer antler was widespread. Flintworking also took place on the site. Among the tools on the platform were flaked flint axes, adzes, and bone mattocks and picks of the kind used for grubbing up roots and tubers. In common with other groups of this period, the inhabitants of Star Carr kept a dog (a domesticated wolf), possibly for use in hunting as much as for companionship.



**Figure 21** Selection of tools and weapons from the ninth millennium BC campsite at Star Carr, North Yorkshire. 1–2: elk antler matooks/picks; 3–7: flint axes/adzes; 8–11: barbed antler points; 12–14: scrapers; 15–18: awls/points; 16–17: trimmed flakes; 19–32: microliths. [After Clark 1954, figs. 35, 38, 39, 40, 43, 64 and 69]

Another important find at Star Carr was a wooden paddle indicating the importance of boats at this time, although no actual canoes or watercraft of this age have yet been found in Britain. At Star Carr and elsewhere birch bark is a fairly common find, its tar being used as a sealant and on occasion used in small blocks as a kind of chewing gum.

The inhabitants of Star Carr wore beads of shale and amber, probably made from raw materials collected on the nearby coast. At least some items would have been decorated and coloured, but nothing of this is visible in the preserved material; haematite lumps may have been crushed up for medicinal purposes or for body painting. Fragments of iron pyrites had undoubtedly been used for fire-making. More unusual were the 21 stag frontlets replete with antlers modified and with perforations around the edge so they could be attached to a garment. Their purpose is unclear, but Clark suggested they were headdresses used as part of a disguise while hunting or to emulate deer during shamanic rituals.

For Clark, Star Carr was a campsite occupied seasonally in the winter and early spring by 20 to 25 people over a period of perhaps 50 years or more. Subsequent re-analysis of the original excavation archive and associated finds, together with further small-scale excavations by Paul Mellars in 1985–9, have prompted various re-interpretations and expanded understandings of the site. It is now clear that the centre of activity was not the platform but an area a little to the east where the remains of a dwelling have been found; that the total area of occupation was larger than initially thought and more than 100m across; and that human impacts on the local environment included periodic burning of the local reedswamp. A series of radiocarbon dates shows that occupation occurred in two main phases, the first centred on 8750 BC and the second at about 8600 BC. Each involved periodic visits to the site by a group of perhaps four or five nuclear families for part of the year. These visits were associated with local burning of the vegetation to clear back the woodland. Among the activities taking place at the site there are unusual enterprises, with clear evidence for woodworking, flintworking, and antlerworking. The presence of a very large number of barbed antler points, the antler frontlets, and a scatter of stone beads have been used to propose a ritual purpose for the site in a way that rather overplays the evidence. Certainly it was a complicated site, but one used by people for whom magic and ritual were embedded in the everyday activities of obtaining and processing food, staying warm and safe, projecting their identity onto the world, and making sense of the cosmos as they perceived it.

Curiously, Star Carr is unique as an archaeological site although many attempts have been made to find something similar in other parts of the country as well as nearby. Extensive surveys around what would have been the shoreline of Lake Flixton have revealed more than a dozen other concentrations of occupation debris from about the same time, but none as extensive or dense as Star Carr. Most seem to represent small short-term activity areas used for a few seasons and then abandoned. Dozens of similar campsites are known right across Britain from Glenbatrick on Jura, Argyll and Bute, and Long Howe, Orkney Islands, to Shedfield in Hampshire; from Kelling Heath, Norfolk, to Nab Head, Pembrokeshire. There are also many in between including Cass ny Hawin on the Isle of Man; Oakhanger, Hampshire; Lackford, Suffolk; Broxbourne, Hertfordshire; and Downton, Wiltshire. Such sites occur in many different

situations in the landscape, from coastal, riverside, and lakeside positions to sheltered spots high in the uplands.

Clusters of sites are also known, as along a 4km stretch of the rivers Kennet and Lambourn between Newbury and Thatcham in West Berkshire. Here people were periodically occupying dry land on the river terraces over more than a millennium. Michael Reynier has usefully sorted out the sequence in this area into three stages: early sites characterized by Star Carr-type flint-working industries with simple obliquely truncated points; middle period sites characterized by long obliquely retouched microliths such as occur at Deep Carr, North Yorkshire; and a third phase when flintwork similar that of the Horsham industries was made, sometimes with hollow-based points. One of the earliest sites, dated to 9115–8494 BC (R-24999/2: 9418±60 BP), is at Faraday Road in Newbury, where a small campsite had areas given over to flintworking and to the processing of wild boar that had been hunted in nearby woodland along with aurochs, red deer, and roe deer. Hazelnut shells suggest that plants were being harvested nearby as well. At Thatcham III, dated to 8636–8261 BC (OxA-2848: 9200±90), two main phases of occupation represented by Star Carr and then Deep Carr industries were found in the same area. Further excavations in 1989 ahead of an expansion to the Newbury Sewage Treatment Works also revealed two distinct episodes of activity, slightly later again at around 8560–8000 BC (BM-2744: 9100±80 BP). Use-wear analysis of the flint tools suggested that these occupations were the home-base for groups exploiting plant foods such as hazelnuts in the area.

Exploitation of the uplands was extensive and locally intensive at this time, with some of the higher peaks above the tree-line. The Pennines, the North York Moors, the Mendips, and most other upland areas have yielded a large number of flint scatters containing microliths, typically located to command good visibility of the surrounding landscape and in many cases probably just above the prevailing tree-line. More sheltered spots within the main valleys penetrating the uplands were also used. Most are only known through surface scatters of flintwork but at Deepcar, North Yorkshire, excavations on a site in a valley beside an upland stream revealed an extensive flint scatter suggestive of a settlement, together with slight traces of a small structure, possibly a shelter or a windbreak around at least three hearths.

In the Welsh uplands at Waun Ffynen Felen, Powys, occupation dating to between 9000 and 8000 BC has been recognized in a plateau landscape at more than 480m OD where a shallow upland lake formed an attractive hunting ground for waterfowl perhaps with hides or hunting stands around the eastern side of the lake. Flint and chert from riverine and coastal sources beyond the uplands indicated something of the annual range over which these communities operated.

Caves were sometimes used as temporary camps in the Mendips, south Wales, Creswell Crags, in the Pennines, and Ulva Cave on Mull, Argyll and Bute, where occupation began around 7131–6374 BC (GU-2704: 7800±160 BP). At Sand, Applecross, Highland, a midden outside a small coastal rock-shelter was associated with stone tools, an antler harpoon and evidence for personal ornament in the form of a perforated boar tusk and pieces of ochre that may have been used for body-painting. Criss-cross engraved markings in a lattice pattern have been found

engraved on cave walls at Aveline's Hole and Long Hole on the Mendips, Somerset, in a style rather reminiscent of the motif seen on an older decorated rib-bone from nearby Gough's Cave.

Coastal settlements are also known. In south-west Wales, Nab Head Site I, Pembrokeshire, excavated by Andrew David in 1980 dates to around 8623–8284 cal BC (OxA-1495: 9210±80 BP). Some 98.8 per cent of the recovered worked stone was beach flint, supplemented by easily flakable shingle such as tuff, rhyolite, and cretaceous greensand abundant in Irish Sea Drift deposits and also available on local beaches. In addition, however, a kind of blue-grey shale identical to material available at St Bride's Haven about 1km along the coast to the east was used to make small perforated beads. Nearly 700 such beads are known and blanks used for making them were found at the site; oval in shape, typically 2–3mm thick, they were perforated by drilling a U-shaped hole from one side only using a flint drill-tip. Comparable beads have been found singly at sites across south-west Wales and some kind of exchange network radiating out from Nab Head must be suspected.

On Rhum in the Hebrides, Highland, excavations at Kinloch by Caroline Wickham Jones revealed hollows, pits, and postholes as well as evidence for the exploitation of Rhum bloodstone, agate, quartz, and flint all dated to between 7940–7480 BC (GU-1873: 8590±95) and 6339–5735 BC (GU-2211: 7140±130). Bloodstone was used for the manufacture of flaked tools which were traded with communities on islands up to 100km away. On the east coast of Scotland a classic campsite of the mid ninth millennium BC overlooking the confluence of the Forth and Almond was found at Cramond, Edinburgh, associated with early geometric microliths, scoops, and stakeholes forming the remains of a light-weight structure. Further north, a shell midden excavated in 1977 at Muirtown near Inverness, Highland, showed short-term occupation, a focus on mussels, and a series of superimposed hearths dated to 4651–4345 BC (GU-1473: 5635±65 BP).

### ***Houses and monuments***

The remains of a handful of houses dating to between the tenth and seventh millennia BC have been found in Britain, all of them timber structures that probably had thatch roofs. One discovered at Howick, Northumberland, in 2002 and excavated by Clive Waddington was 6m in diameter with a sunken floor and a central hearth, and was built from posts 35cm in diameter (22). The doorway opened to the west and the three phases of reflooring suggests periodic reoccupation accompanied by refurbishment, probably by a family-sized group. The house was built about 7800 BC and was used over a period of 150 years or so. Food-waste from around the hearth shows that the inhabitants were fond of hazelnuts and also ate pig, fox, birds, and grey seal while technologically their tools form part of the narrow-blade tradition and were made of local beach flint. An almost identical structure was found just 60km to the north at East Barns, East Lothian, in advance of limestone quarrying, and both find parallels at Braishfield, Hampshire, where the structure is dated to 8171–7184 BC (Q-1192: 8540±150 BP), and Ronaldsway, Isle of Man, where



**Figure 22** Roundhouse dated to *c.*7800 BC at Howick, Northumberland, under excavation in 2002. [Photography courtesy of Clive Waddington. Copyright reserved]

a house *c.*7m across with a central hearth was built in a slight hollow in about 6500 BC, perhaps as part of a more extensive settlement that included the nearby site of Cass ny Hawin on elevated ground overlooking the Irish Sea. At Ben Lawers, Aberfeldy, Perth and Kinross, a circular hollow 3m in diameter seems to have formed the floor of a dwelling at an upland occupation 655m OD with views over Loch Tay. Two rather smaller temporary tipi-like structures each 1.5m across were indicated by rings of stakeholes at Downton, Wiltshire.

Simple monuments in the form of markers and pits were also constructed by these communities, perhaps to link the natural world with the human world. When the car park for visitors to Stonehenge, Wiltshire, was built in 1966, three postholes and a tree-throw pit were discovered. The postholes had supported substantial pine posts more than 0.75m in diameter and rising perhaps 2.5–3m out of the ground. One was dated to 8820–7730 BC (HAR-455: 9130±180 BP), another slightly later at 7480–6590 BC (HAR-456: 8090±140 BP), and Mike Allen has suggested that they represent a succession of decorated posts celebrating the place or the beliefs of the people who used it, similar perhaps to the totem poles of coastal communities on the north-west coast of North America. The poles may well have referenced a great tree that must have stood more or less in line. When the car park was extended in 1988–9 a large pit, 1.3m deep and recut at least once, was found; it dated to the eighth millennium BC. All these features had been dug



within a landscape of open mixed pine and hazel woodland and may have signalled an importance to the area that carried through to the construction of Stonehenge itself some five thousand years later.

This activity in the Stonehenge landscape was by no means unique. At Hambledon Hill, Dorset, a series of pits and scoops dating to the eighth millennium BC were found on a hilltop later occupied by a series of ceremonial enclosures (see Chapter 4), and at Chapelfield, Cowie, Stirling, three pits with associated carbonized plant remains suggest periodic visits between the seventh and fifth millennia BC. Most impressive of all, however, is the evidence from Warren Field, Crathes, Aberdeenshire, where 16 round pits of various sizes were dug in a slightly irregular line during two phases of activity between 8210 and 6690 BC. In each case the spoil from digging the pit was piled up round about before a deposit of charcoal-rich material was placed in the bottom; some showed signs of recutting. The orientation of this pit-alignment towards the River Dee with its prolific salmon and sea-trout runs between February and September makes it easy to imagine contemporary celebrations at the site.

### ***Burials***

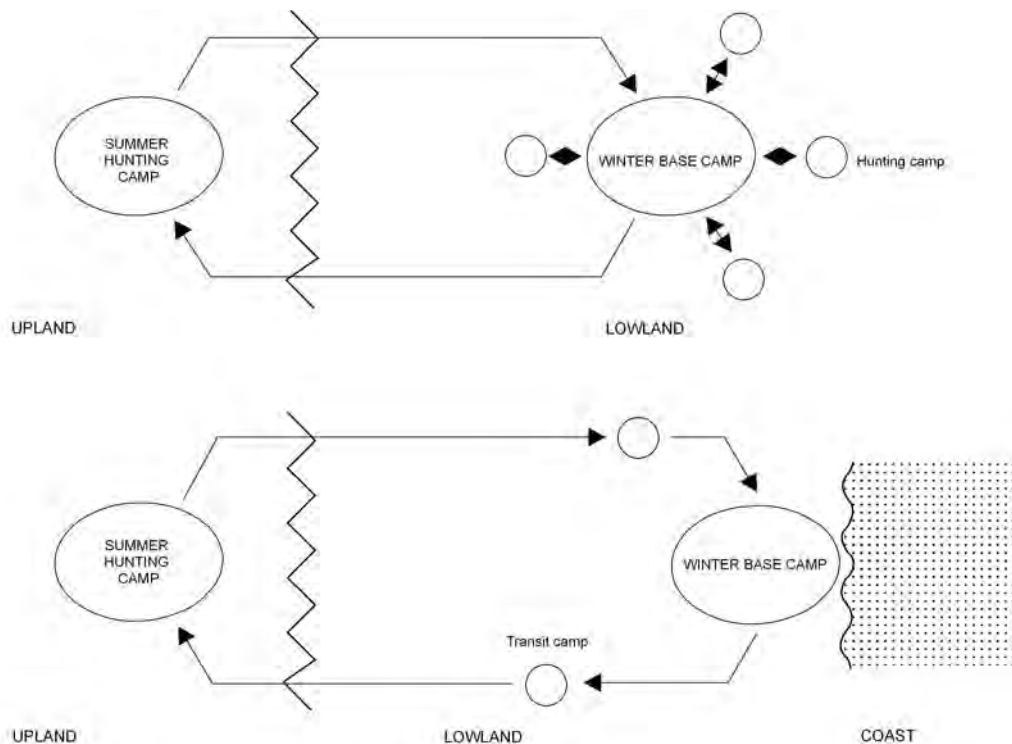
More than a score of burials from the tenth through to the seventh millennia BC are known from a range of contexts, although no single burial tradition can yet be recognized. The best known, and most complete, burial so far recovered was found in Gough's Cave, Cheddar, Somerset, in 1903. It was the unaccompanied inhumation of a young adult male (called 'Cheddar Man') and dates to 8610–7980 BC (OxA-814: 9100±100 BP). Its presence within a cave occupied in earlier times may suggest some interest in connecting with the past. An unusual burial deposit was reported in 1805 from Aveline's Hole, also on Mendip, when 50 skeletons placed parallel to each were found in association with perforated animal teeth, animal bones, a winkle shell, and a fossil ammonite; a sample bone has been dated to 8610–7980 BC (OxA-799: 9100±100 BP). Badger Hole, also on the Mendips, Somerset, and Kent's Cavern, Torbay, likewise yielded human remains dated to between 9000 and 7000 BC again suggesting the reuse of ancient sites. Some of the many undated cave burials elsewhere may well prove to be of this period. Burials at open sites are less common, but at Thatcham II, West Berkshire, excavations by John Wymer revealed human remains associated with an inverted skull-cap from a red deer together with antler hammers that had seemingly been used in the manufacture of stone tools.

### ***Territories, movements and population***

How all these various sites in different parts of the landscape related to one another is far from clear. Most are small and could hardly support a community all the year round, but there are differences in scale and location which suggest that some are more permanent than others.

Comparisons with hunter-gatherer communities elsewhere in the world suggest that a combination of base-camps and seasonal resource exploitation camps forms a common if not universal pattern and it was this model that Grahame Clark used for Star Carr, North Yorkshire, by suggesting it was a base-camp occupied from midwinter through into the spring and that in summer the inhabitants moved away to higher ground or to the coast (23).

Such simple neat models of settlement can be overly general and, as Penny Spikins has emphasized, there is no universal pattern as local conditions and events determine what actually happens year by year. However, general support for seasonal exploitation of different environments comes from the analysis by Roger Jacobi of flint tools found on upland and lowland sites. This revealed that upland assemblages mostly comprise finished tools and microliths from weapons used in hunting, while most of the waste pieces, known as microburins, are by-products of making microliths. In contrast, at Star Carr and other lowland sites, microliths and microburins represent less than 45 per cent of finished tools. Instead the majority of tools were for meat-processing and manufacturing activities. Moreover, analysis of the animal bones from Star Carr shows that only certain portions of slaughtered animals were brought to the site; less useful



**Figure 23** Simplified models of seasonal movements by hunter-gatherer groups in ninth to seventh millennia BC. [Source: Author]

parts such as the pelvis and spine are missing and were presumably discarded at the kill site. The picture that emerges is thus complicated, involving a number of seasonally specific occupation sites for each group and long distance movements between them. The annual range of these communities could have been considerable, perhaps as much as 80km. Fissioning and fusion, the formal dispersal and subsequent reuniting of the group, probably played an important role in the distribution of population at different times of the year, and variations in the general pattern may be expected for groups living near the coast, another prolific source of food.

The size of individual groups at this time is hard to estimate. Working on the basis of evidence from Star Carr, communities of *c.*25 people were suggested by Grahame Clark. The general impression is that while the range of resources exploited during the early Flandrian changed considerably, the basic pattern of social organization remained much the same with small bands as the basic social unit. What this means for overall population levels can only be guessed at. Don Brothwell postulated anything between 3,000 and 20,000 people on the basis of hunter-gatherer population densities among recent groups, but this is probably an underestimate since the resources available in the developing post-glacial forest were very abundant compared with those available to hunter-gatherer groups that flourished in recent centuries.

Throughout the period 10,000 BC–6000 BC relative sea level was rising and coastal areas were in a state of constant flux. Ireland separated off from Britain fairly early, at *c.*10,000 BC; Shetland, Orkney, the Hebrides, the Isle of Man, and the Scilly Isles a little later, between 8000 BC and 7000 BC. Doggerland, the vast tract of land under the North Sea, had disappeared by 6000 BC, and at about this time the Channel River became the English Channel and the Straits of Dover were inundated so that the North Sea and the Atlantic Ocean joined together. Thus in thinking about hunting territories and settlement areas consideration has to be given to flooded landscapes as well as those on modern dry land: Bay of Firth in the Orkney Islands and Boulder Cliff off the Isle of Wight in the Solent are both under investigation as submerged landscapes that could have been known to Maglemosian hunters.

## **INSULAR DEVELOPMENT AND EXPANSION 6000–4000 BC**

By 6000 BC Britain had become an island cut off from the mainland of Europe except by boat, although parts of Doggerland now under the North Sea between Humberside and Denmark may well have been islands for a millennium or more, and what are now small archipelagoes such as Orkney and Scilly were single large islands. Catastrophic events may have played a part in these changes. There is evidence for tsunamis battering the coast of eastern Scotland about 5840 BC as a result of a massive submarine landslide (the Second Storegga Slide) off the continental shelf west of Norway. At first the sea would have retreated, and for a moment people may have thought Doggerland was reappearing. Then suddenly the coast was battered by a series of four or five waves up to 20m high, inundating coastal settlements and depositing a layer of sand up to 0.7m thick in places such as Beaulieu Firth, Highland, and left rocks the size of a small car high and

dry in Sullum Voe, Shetland Islands. It was a volatile time as the eruptions of Icelandic volcanoes in about 4900 BC and 4400 BC were sufficiently major to have deposited layers of volcanic dust (tephra) across parts of the Scottish landscape to the extent that it is still recognizable in relevant accumulative deposits.

Data from ice cores suggest a period of reduced rainfall between 7000 and 5500 BC followed by a period of climatic instability through to 4000 BC. Pollen recovered from peatbogs across Britain shows that woodland became more closed during the late Boreal (Pollen Zone VI), with oak, alder, elm, and lime taking over from pine as the dominant species although local conditions were so variable that generalization is impossible. Only the highest ground in the uplands remained free of woodland.

Social changes at this time were likely to have been profound. Jim Leary has explored the impact of climatic change and the loss of the traditional hunting grounds to marine inundation, emphasizing that such changes were not so much the backdrop to cultural events but something lived in, experienced, and rationalized. Stories, myths and legends no doubt circulated, few perhaps as powerful as the tales of topographic oceans and the lives of the ancestors who once lived in Doggerland.

Technological changes can be seen in the development of new types of tools and weapons and, as Roger Jacobi has pointed out, isolation from the Continent led to a curtailment in the range and diversity of some aspects of material culture but an expansion of others. The bone points of earlier periods were slowly abandoned while the shape and style of microliths changed to encompass a wide range of geometric forms, in some cases of minute size. Such new forms probably indicate the introduction of new types of missile, but what these might have been is not known. Flintworking itself continued in the blade tradition; very narrow blades struck from small cores were favoured. In areas where flint is scarce or absent especially frugal use was made of cores and waste flakes alike. Perforated stone tools in the form of so-called pebble hammers and adze-hammers were made, some of which were probably weights for digging sticks, and from the early fifth millennium BC ground stone axes appear, well represented by a sandstone example from Cambwell, Lanarkshire, and igneous specimens from Nab Head, Pembrokeshire (see below).

The increased density of population prompted by the loss of land to the rising sea may also have been supplemented by a naturally rising population from about 6000 BC. Whereas earlier groups favoured light well-drained soils, almost all soil types were used to a greater or lesser extent after 6000 BC. Sites were often situated near the junction of different soils, and river valleys formed the focus of settlement in many areas. The reason for this was presumably easy access to a wide range of resources.

Available foodstuffs changed little after Britain's isolation from the Continent, although the elk may have been an early casualty of over-exploitation by hunting groups since it disappears from the archaeological record before 6000 BC. It is, however, noticeable that the range of resources exploited at individual sites increases, especially at coastal sites. Merek Zvelebil has argued that the use of plant foods increased at this time, as shown by the use of hoes and mattocks for clearing forest and maintaining more open landscapes as part of a strategy to increase

the productivity of nut and fruit trees, shrubs, wetland plants, and possibly also native grasses. Plant-stuff may have accounted for as much as 30–40 per cent of the diet. In a sense people had started farming the forests, leading Lawrence Keeley to define these people as ‘complex hunter-gatherers’ with long residency at base-camps, high populations relative to local carrying capacity, and considerable reliance on stored food.

### ***Coastal settlement***

Some of the most impressive settlements of the sixth and fifth millennia BC have been found on the coast, although changing relative sea level means that some are now considerably above the modern shore, some are more or less as they were relative to the coast, and some are partly submerged within the intertidal zone. In some areas whole landscapes can be recognized as submerged forest beds such as those at Titchwell, Norfolk, Dove Point, Wirral, and Freshwater West, Pembrokeshire. At Formby Point, Sefton, shoeless human footprints record visits to the coast by adults and children, while at Goldcliffe, Monmouthshire, there are not only people walking the foreshore but also cranes, deer, and aurochs.

Middens created by the accumulation of debris from exploiting shellfish and crustacea are commonly associated with coastal sites of the period, especially along the English Channel and Atlantic coast. At Culver Well on the Isle of Portland, Dorset, excavations by Susann Palmer revealed an extensive midden covering 650m<sup>2</sup> made up of limpet and winkle shells that has been dated to 6350–5740 BC (BM-473: 7150±135 BP). A stone surface was laid over part of the midden and served as a floor for temporary structures while a large heavily burnt pit nearly 1m across and 1m deep appears to have been used for cooking. On the shore of the Severn Estuary at Westward Ho!, Devon, a large kitchen midden loosely dated to 6090–5570 BC (Q-1211: 6955±140 BP) comprises mostly oyster, mussel, limpet, and winkle shells. But it was not only marine resources which were used by its occupants: red deer and wild pig bones were also present suggesting the use of the local dry-land environments too. A similar pattern is repeated at sites in Wales such as Nanna’s Cave on Caldey Island, Pembrokeshire, and at Newborough Warren, Isle of Anglesey. Further north, early shell middens have also been recorded at Port St Mary on the Isle of Man, and at Risga in Loch Sunart, Argyll and Bute, where they have been dated to about 5210–4700 BC (OxA-2023: 6000±90 BP), and Lussa Wood on Jura, Argyll and Bute, where a hearth or cooking place in the form of three conjoined circular settings of large stones was found in a midden dated to about 8200–6430 BC (SRR-160: 8194±350 BP).

Some of the most impressive middens in western Britain lie in the southern Hebrides and have been the subject of much study by Paul Mellars working on Oronsay, and Steven Mithen on Isay and Colonsay, Argyll and Bute, through the 1980s and 1990s. Once considered to represent the settlements of a distinct ‘Obanian Culture’, these sites are now seen as local articulations of more extensive traditions based on the exploitation of marine resources. Five middens were investigated on Oronsay, of which Cnoc Coig was examined in most detail. Dating to between

4650–4350 BC (Q-3005: 5650±60 BP) and 4520–3980 BC (Q-1352: 5430±130 BP) the mound was 30m by 20m and accumulated as a result numerous closely spaced occupations based around a large hearth and simple shelter. People were mainly there in the spring and early winter, exploiting the shoreline and intertidal zone for crab, limpet, periwinkle, dog whelk, oyster, and lobster. They also fished with nets or spears in shallow coastal waters for wrasse, saithe, and ling, and hunted seals and seabirds, including the Great Awk. Stable isotope studies by Rick Schulting and Michael Richards show that the mainstay of their diet was marine food, but other resources were important too. Oronsay is a small island and its middens raise many questions. Although Mellars suggested a cycle of movement between middens through the year as prevailing winds and tides varied, there is still the problem of where the people obtained other resources. They may have moved to the larger island of Colonsay to the north for part of the year, but there is little evidence here for the kind of animals exploited. It is more likely that the Oronsay midden-dwellers had a home-base on the adjacent Scottish mainland.

On Scotland's east coast, occupation at Morton on Tay, Fife, between 6000 BC and 4000 BC was spread over a wide area. Excavations by John Coles revealed various structures and hearths as well as evidence for flintworking. Settlement may have been on a small scale each year, but the range of resources exploited was wide and the number of visits considerable. Seashore food was consumed in large quantities, but fishing supplied cod, salmon and sturgeon, and seabirds were also exploited. Dry land resources included grasses and at some periods red deer.

A few coastal sites were involved in the exploitation of local resources, production of tools and trinkets, and cross-channel and long-shore trade. At Culver Well, Dorset, for example, local Portland Chert was used for making picks while periwinkle shells were perforated for use as ornaments. Further west, at Nab Head, Pembrokeshire, reoccupation of the headland between 6000 BC and 5000 BC continued the use of local beach-flint but also exploited local igneous rock and sandstone for the manufacture of pecked and ground stone axes and perforated stone rings (24). Significantly, early jadeite axes from Europe, especially those of the Saint-Michel, Rarogne, and Pauilhac styles with slightly flared blades, are thought to date to between 5000 BC and 4500 BC and a few might have reached Britain at this time. Supporting such continental ties, Nab Head also yielded three locally made perforated stone rings, very like examples of fifth and fourth millennia BC date from Brittany where their occurrence in association with axes in burial deposits is considered by Yvan Pailler to symbolically represent biological reproduction.

At all these coastal sites boats must have been important. No certain examples from this period are known, although a 4.5m long dug-out canoe made of pine wood found at Friarton Park, Perth and Kinross, in 1878–9 may date to the sixth or fifth millennium BC. Such a craft would have been useful on inland waterways, but not for crossing the open sea. More substantial vessels, perhaps hide-covered boats like modern *currachs*, must have been available as sea-crossings between Britain and Ireland and between Britain and the Continent are archaeologically attested. Coastal communities must also have developed an extensive knowledge of the seascapes around the North Sea, English Channel, Irish Sea, and the eastern Atlantic rim, areas that were probably just as rich in lore and tradition as terrestrial landscapes.



**Figure 24** Hunter-gatherer coastal site at Nab Head, Pembrokeshire. Excavations in progress on the headland. [Photograph courtesy of Andrew David. Copyright reserved]

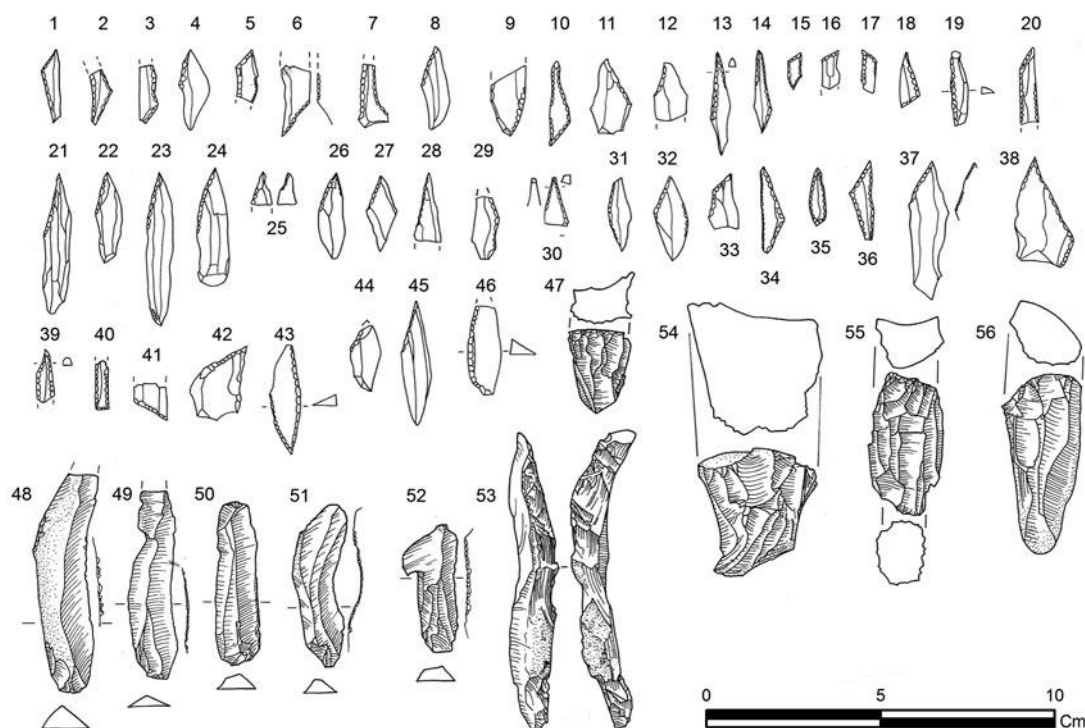
### ***Riverside and lakeside settlements***

Boats would also have been important for occupants of settlements along rivers and beside lakes, environments that also allowed easy access to a wide range of resources and fresh water for drinking, cooking, and washing. Some settlements, such as Farnham, Surrey, reached a considerable size with many occupation foci within a broad spread of occupation, not all necessarily of the same date, a pattern also seen in the Kennet Valley at Wawcott, West Berkshire. At Cherhill, Wiltshire, occupation beside River's Brook focused around a shallow scoop in which were remains of aurochs, wild pig, red deer, and roe deer together with geometric microliths (25), flintworking waste, and small amounts of broken sarsen rock and a quartz pebble dated to 6405–5842 BC (BM-447: 7230±140).

In north-east England numerous settlements have been found along the eight river valleys between the Tees and the Tweed. Rob Young has shown that the main occupation sites were substantial base-camps in the middle sections of the main rivers thus allowing easy access to seasonal camps on the coast for exploiting marine resources and in the uplands for hunting red deer.

### ***Occupation in the uplands***

Upland camps were smaller than in earlier times, but there is some evidence to suggest that in many areas the range and predictability of resources was improved by manipulation of the



**Figure 25** Selection of flint tools from an early sixth millennium BC occupation deposit at Cherhill, Wiltshire. 1–46: geometric and micro-triangular microliths; 48–52: retouched and utilized blades; 53: crested blade; 47 and 54–6: cores. [After Evans and Smith 1983, figs. 17, 18 and 19]

environment. Peat dating to the period 6000 to 4000 BC often shows evidence of woodland fires in the form of charcoal layers accompanied by reduced levels of tree pollen. Paul Mellars, Ian Simmons, and others have argued that regenerated woodland is particularly attractive to ungulates and that while the overall number of animals might not increase much the abundant nutritious browse would help concentrate animals so allowing easier exploitation.

In Wales, evidence for the recurrent use of settlements around Waun Fignen Felen high in the Black Mountains of Breconshire at an altitude of 485m OD saw reoccupation of sites first used more than a millennium earlier. On Bodmin Moor substantial spreads of geometric microliths have been found around Dozmary Pool, while similar spreads from Dartmoor and Exmoor show that the granite uplands of the region were extensively used as hunting grounds.

Manipulation of the environment may have taken place in more low-lying landscapes. Excavations at monuments constructed in the fourth millennium BC, for example Hazleton North, Gloucestershire, and Gwernvale, Powys, revealed earlier forest clearances associated



with occupation dating to the fifth millennium BC. In the Midlands, excavations around Raunds, Northamptonshire, showed that trees had been felled and the stumps burnt during land management operations dating to the fifth millennium BC. In all cases, of course, the land was already fully humanized in terms of being invested with meanings and names: the question is what the physical impact was in terms of how people changed it.

### ***Houses, monuments, and ceremony***

More than two dozen structures that can be interpreted as the remains of simple houses or tents are known from this period in Britain, a high percentage in Scotland and northern England. Many are round or rectangular in shape and from 2.5m to 4.5m across. Most have a hearth in the centre. Beside the River Dee at Nethermills, Moray, excavations in the late 1970s revealed a stake-built structure 4.5m in diameter, while at the other end of Britain four oval structures beside the River Blackwater at Bowmans Farm, Hampshire, have been loosely dated to 4900–4800 BC (OxA-263: 5910±90 BP). Some of the postholes found on coastal sites might be fish-drying racks and windbreaks rather than the remains of dwellings.

As with their Maglemosian predecessors, the insular communities of the sixth and fifth millennia BC had rich spiritual dimensions to their existence. Daily routines were no doubt structured by the changing seasons, and their relationship with the landscape seems to have involved being part of the land rather than detached from it. In a sense their landscapes may have been understood in terms of the meanings and experiences created by patterns of movement within it: the things they saw and experienced. At Down Farm on Cranborne Chase, Dorset, a deep natural solution hollow or doline more than 25m deep that opened up in the fifth millennium BC became the focus of attention for several millennia afterwards. Bones of red deer, roe deer, aurochs, and wild pig occur in the fills together with a handful of flint microliths. Similarly, at Billown, Isle of Man, a naturally formed shaft was capped with oak planks dated to 4899–4719 BC (Beta-110691: 5910±70 BP) while nearby fire-pits and hollows suggest periodic visits and rituals in an area that in later millennia became a major ceremonial centre for the southern part of the island.

On a more intimate scale, at Culver Well, Dorset, a small pit was found sealed beneath a large flat stone. In the cavity had been placed a perforated scallop shell, a flint transept axe, and a large round pebble from nearby Chesil Beach. And at Cnoc Coig on Oronsay, Argyll and Bute, a series of small hollows were cut into the ground and then filled with pebbles from nearby beaches before the midden started to accumulate. Perhaps they were foundation deposits, for while the middens are in some senses natural accumulations they are also, as Josh Pollard has pointed out, monumental and sometimes reach impressive proportions. They could be seen as indicators of the size and wealth of a community. Marking the land through engraving simple rock art, for example cup-marks or perhaps cup-and-ring designs, on exposed natural rock outcrops or the surface of earthfast boulders may also have started in the sixth or fifth millennium BC, although such works are notoriously hard to date.

## ***Burials***

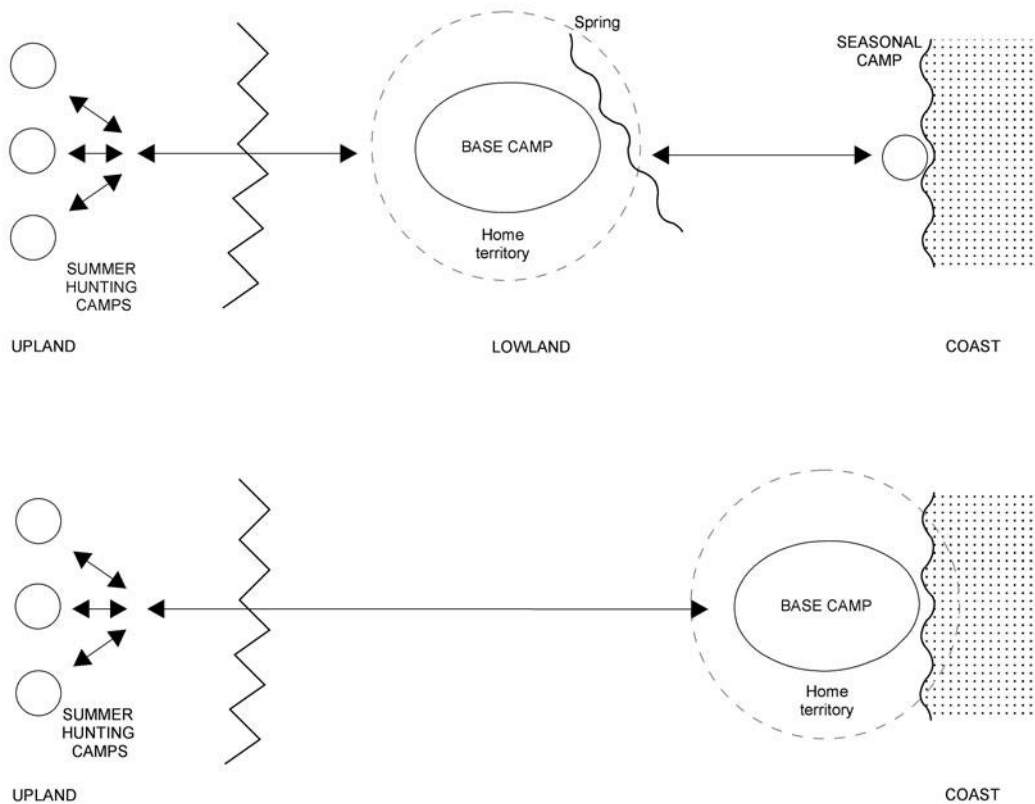
Despite the large number and wide distribution of occupation sites of this period rather little is known of burial practices. A skull from the River Yare at Strumpshaw, Norfolk, hints that depositing remains in wet places was one tradition. By contrast, burying people in caves continued an established tradition and seems to have been widespread. An inhumation dated to 6230–5905 BC (OxA-681: 7190±80 BP) was found in the Paviland Cave on the Gower Peninsula, Swansea, for example, stratified above the much earlier ‘Red Lady’ discussed in Chapter 2, while others have been found at Ogof-yr-Ychen, Pembrokeshire, and Foxhole Cave, Swansea.

Burials are also found in shell middens on the coast. At Cnoc Coig on Oronsay, Argyll and Bute, human remains dated to the period 4400 to 3800 BC occurred in two forms. First, there were loose bones spread through the midden in a fashion typical of the sites across north-west Europe at this time. More unusual, however, small groups of bones, dominated by hand and foot bones, were placed in discrete deposits under and within the midden.

## ***Settling down and regional traditions***

The main implication of the evidence for changes in the use of resources and in settlement patterns after 6500 BC is an overall reduction in group mobility. Some seasonal movement undoubtedly continued, and Roger Jacobi has developed a plausible model of coastal and upland exploitation in south-west Britain at this time which involves only a few summer months away from the main residence area on the coast (26). Similar strategies were perhaps practised elsewhere, but in some places seasonal movement may have been abandoned altogether. Parts of central southern England, for example the Kennet Valley, were really quite heavily populated by 4,000 BC. Clive Gamble has estimated populations of between 0.02 and 0.09 people per square kilometre for hunter-gatherer groups which would equate with a population across Britain as a whole of between 4,500 and 20,500 souls.

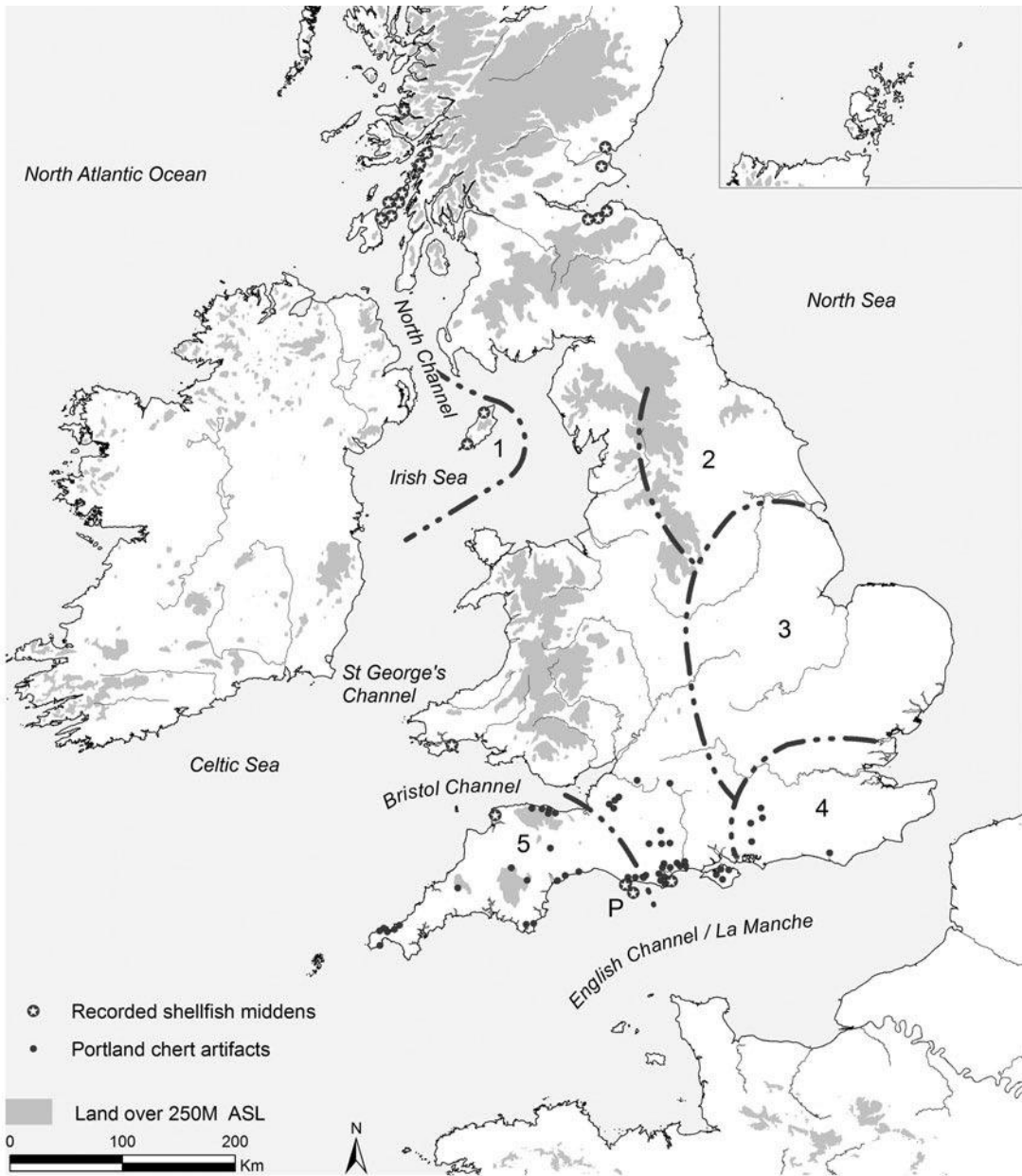
There is some evidence for the development of regional traditions in tool-making. The reasons for this are not fully understood, but a detailed analysis of microlith typology by Roger Jacobi has led to the definition of four or five large regional groupings or social areas (27). Whatever the nature of these groupings some interaction between communities within each must have taken place if only to promote the adoption of common tool types. Interaction probably went rather deeper than this, however, and the beginnings of inter-group exchange systems may be glimpsed. Fine flint and other stone types for tool-making are not widely available and as mobility declined so ways of obtaining supplies of raw materials must have been established by groups living remote from desirable resources. It is known that Portland Chert from Dorset somehow made its way inland to communities as far north as the Cotswolds, while sandstone perforated maceheads may have been another commodity which travelled considerable distances. Rhum Bloodstone circulated extensively through the southern Hebrides. Flakes of silicified tuff from Carn Alw,



**Figure 26** Simplified model of seasonal movements by hunter-gatherer groups in sixth to fifth millennia BC.  
[Source: Author]

Pembrokeshire, were found with geometric microliths beneath a round barrow at Trwyn Du, Isle of Anglesey, and a chip from a polished stone axe of Antrim Porcellanite was found at Lussa Wood I on Jura Argyll and Bute. Clearly, people and things were moving about. Verna Care has also shown that flaked axes and adzes were produced at a limited number of locations in the flint-rich chalklands of Wessex, and from there widely disseminated to communities living off the chalk, either through exchange or by groups visiting the chalklands within a cycle of movements. Looking further afield it is likely that some of the jadeite axes originating at Mont Viso and Mont Beigua in the Italian Alps that circulated in Europe during the fifth millennium BC found their way into Britain at this time.

Exactly how these exchanges worked, or what the social areas represent, is far from clear, but the establishment of these institutions within hunter-gatherer societies, the identification of significant resources for trade, the presence of coastal and maritime-based economies, and a reduction in group mobility set the scene for one of the most important social changes visible in the prehistory of Britain.



**Figure 27** Map showing the distribution of recorded sixth and fifth millennia BC shell middens, Portland Chert artefacts (source marked P), and putative territories based on identifiable flint tool styles. [Based on Jacobi 1979, figs. 16 and 20; Palmer 1970, Appendix A]

# 4

## BLOOD ON THE TRACKS

### Hunter-farmers 4000–3200 BC

The hunter-gatherer societies described in the last chapter were remarkably successful; their survival over several millennia is testament to their skills in adapting to a changing environment. But something drastic happened at around 4000 BC when hunter-gatherers became what might loosely be called farmers in what Gordon Childe once dubbed the first ‘Agricultural Revolution’.

Archaeologically, this change can be seen in three ways through what is sometimes known as the ‘farming package’. First, new types of artefacts, including sickles, querns, polished stone axes, and pottery containers appear for the first time, replacing the microliths, points, digging sticks, and spears of earlier centuries. Second, there is the construction of new kinds of site, including longhouses, settlements, and a variety of ceremonial monuments. And third, new modes of subsistence moved people away from a dependence on hunting and gathering to satisfy immediate needs, towards reliance on a single harvest for the year through manipulating the biological reproduction of selected plants (wheat and barley) and animals (cattle, pigs and sheep/goats). To achieve all three, civil engineering projects and communal works became a part of everyday life. Time and energy were invested in dividing and utilizing landscape resources on a previously unprecedented scale that inevitably led to considerable environmental impacts.

Behind the archaeological evidence much more was going on. For example, Ian Hodder, Alasdair Whittle, Julian Thomas and others all suggest that what was really happening here was a shift in ideology and the adoption of new world-views that encouraged people to manipulate nature and establish new relationships with their world through alternative belief systems and cosmologies. Hunting and gathering depended heavily on the skills and experience of individuals and a very close relationship with the land whereby people were metaphysically part of the land; agriculture and animal husbandry depended on communal effort and thus distanced individuals from the land they sought to tame and modify. It is a view supported by Colin Renfrew’s work on language dispersals because new technologies and cosmologies need new concepts

which in turn demand new words to give them expression. Working back from the long-recognized relationships between modern Indo-European languages Renfrew suggests that the spread of farming provided the social context for the expansion across Europe of a proto-Indo-European language whose homeland lay in the Middle East and which could be considered ancestral to later language families such as Slavonic, Germanic, Hellenic, and Celtic. While sceptical of placing too much emphasis on comparative linguistics, he follows others in noting that many of the words common to a cross-section of these later languages groups that might reasonably be derived from an Indo-European lexicon include many associated with farming activities (e.g. herd, cow, sheep, goat, pig, dog, horse, bee, grain) but none relating to metals or metal-working which was a much later development.

Clearly, the impetus for changes in material culture and ways of thinking that occurred about 4000 BC in Britain owe much to external influences as well as the activities of the indigenous population, and in this connection it is relevant to look briefly at what was happening through the fifth millennium BC on the Continent.

## CONTINENTAL ROOTS

Well before 6000 BC the rich fertile loess lands of the major north European river valleys such as the Rhine, the Meuse, and the Weser supported farming communities of the *Linearbandkeramic Culture* (LBK) who lived in longhouse villages, cultivated wheat and barley, and reared cattle. During the early fifth millennium BC farming groups moved off the loess into areas with less-fertile soils to establish a series of post-LBK communities such as the *Stichbandkeramik*, *Lengyel*, *Rössen*, *Hinkelstein*, *Grossgatach*, *Rubane*, and *Cerny Cultures*. Those who moved westwards into central France encountered other farming groups, the *Chaséen Culture*, whose origins lay on the Mediterranean coast. Those who moved eastwards encountered a third group of farming communities known as the *Funnel-necked Beaker Culture* (*Trichterbecherkultur* or TRB) whose origins lay in the lands between the rivers Elbe and Vistula in modern-day Poland and the Czech Republic.

Expansion continued, and by 4500 BC the descendants of two of these farming cultures had reached the Atlantic coastlands: the *Michelsberg Groups* through eastern France and the Rhine Valley who developed from post-LBK *Rössen Culture* communities; and the *Northern Chaséen Groups* in Brittany, Normandy, and the Vendée (including the *Castellic*, *Chambon*, and *Pinacle Cultures*) who developed from the long-established *Chaséen Culture* of southern France and the *Cerny Culture* of central France. The effect of these migrations and colonizations was that the indigenous hunter-gatherer communities of Britain and the North European Plain from the Rhine Delta through to the River Oder were hemmed in by agriculturalists and left to survive on traditional resources. How much this was of their own choosing and how much forced upon them is unclear, but things seem to have come to a head around 400 BC with wide-ranging socio-geographical changes in the Atlantic coastlands of far north-western Europe.

Grossly simplified, indigenous coastal communities known as the *Ertebølle Culture* in Denmark and southern Baltic, and the *Oldesloe-Kobrow Culture* in northern Germany east of the River Elbe, were drawn into the TRB traditions which expanded eastwards across the north European plain to become the *Northern TRB* in a territory that extended from the Elbe through Jutland, southern Sweden, and northern Germany as far as the River Oder. Further south, the indigenous hunter-gatherers of the *Swifterbant Culture* in the Netherlands, Lower Saxony, and Westfalia also became part of the expanding TRB world to form a *Western TRB* occupying the North Sea coastlands from the Rhine delta through to the mouth of the River Elbe. Perhaps because of their close proximity to neighbouring agricultural communities through the fifth millennium BC *Ertebølle*, *Oldesloe-Kobrow*, and *Swifterbant* communities had a long history of interaction with LBK and post-LBK farming groups through trade and exchange that was presumably symbiotic. Pottery was widely used, and they had access to domesticated livestock long before they adopted the full ‘farming package’. The transition in these areas accords with what is usually referred to as ‘acculturation’, the adoption of ideas, beliefs, traditions, and practices through personal contact and interactions between societies. But did the same happen in Britain which was physically more remote and had fewer opportunities for direct contact with farming communities?

## HANDS ACROSS THE WATER: EARLY FARMING IN BRITAIN

How exactly hunter-gatherer communities in Britain adopted farming is a question that has fuelled a vigorous debate in archaeology over recent decades. Stripped to the basics, two competing explanations dominate discussions. One view sees migrations of pioneer communities originating in one or more areas of the near continent followed by the colonization of Britain and the consequent annihilation or absorption of indigenous populations. The other view sees the acculturation of indigenous people across Britain through contacts and alliances with continental groups. Neither model fits the available evidence at all well, and while each has its proponents there is widespread recognition that the peculiarities of Britain’s island situation with potential maritime links to many different cultures along the Atlantic coast of mainland Europe makes the situation different and complicated.

Certainly there were some long-distance movements of people from the Continent to Britain, especially it seems women. Studies of DNA in modern populations across the British Isles show an essentially stable male genetic profile over the last 10,000 years with very little outside influence. By contrast mtDNA and X-chromosome variation indicates periodic influences on the maternal genetic heritage which may link with Stephen Oppenheimer’s calculations that between 10 and 30 per cent of genetic material in extant modern British populations arrived here during the fourth millennium BC. Importantly, he also notes that the impact of these arrivals was patchy, and that three main sources can be recognized. One comes from populations in Iberia and western France along the Atlantic seaways spreading into western Britain; a second comes from

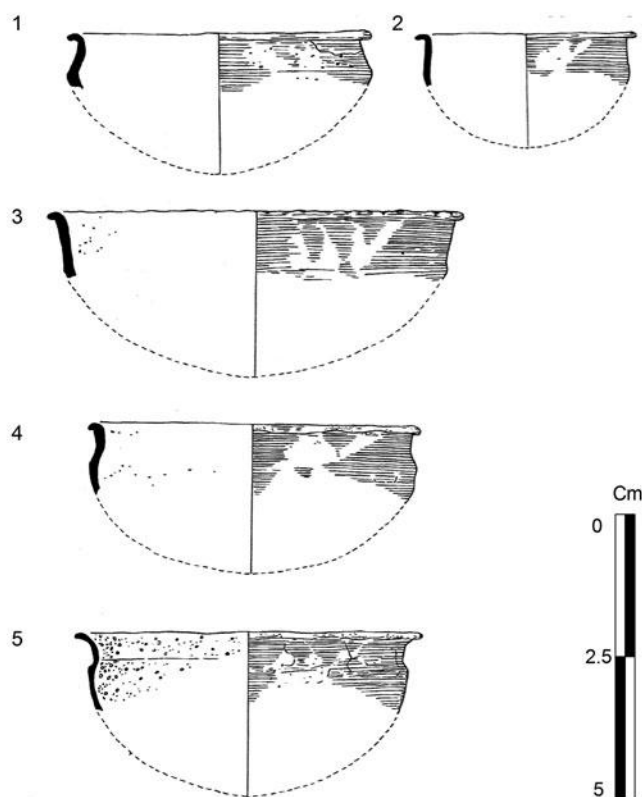
across the southern North Sea and is mainly found in southern Britain as far as the Welsh Borders and into Scotland; and the third came across the northern North Sea from Scandinavia, and is found mainly in northern Scotland, the north-east of England, the Hebrides, and the coastlands of the Irish Sea basin.

Movements between Britain and the Continent must also have involved the transportation of the seed corn and animals necessary to underpin the northern European farming traditions as neither domesticated cereals nor sheep are native to Britain. Moreover, DNA studies show that while aurochs (*Bos primigenius*) were indigenous, domesticated cattle (*Bos taurus*) are genetically distinguishable and can be traced back to an ancestry in the Near East. Pigs, by contrast were probably locally domesticated in various parts of the Old World, including north-west Europe. Fairly substantial boats must have been used for these movements, possibly open hide-covered *currachs*, but none have yet been found.

Movement between different parts of Britain and adjacent areas of the Continent is also evident from the distribution of archaeological materials, and here the evidence of genetic connections and shared material culture comes together. Along the Atlantic seaways there are close links with *Northern Chaséen Groups* occupying the coastlands of western France from Normandy to the Gironde. These are probably among the earliest links and may extend back before 4000 BC. Indeed, Alison Sheridan has identified a decorated Castellar bowl with rainbow-pattern decoration in a simple passage grave at Achnacreebeag near Connel, Argyll and Bute, on the west coast of Scotland which finds parallels with an example from Vierville (Calvados), France. Monumental architecture on Britain's west coast also links closely with structures in western France (see below). Likewise, monuments in south-eastern Britain show connections across the southern North Sea to late *Michelsberg Groups*. Some of the earliest of pottery in Britain – now known as Carinated Bowl or Plain Bowl pottery (28), but formerly known as Grimston-Lyles Hill Ware – finds close parallels in the middle Swifterbant ceramics from sites such as Hazendonk (North Brabant), Netherlands. Finally, monuments built in the early fourth millennium BC in eastern England and eastern Scotland show connections eastwards to the TRB in Denmark and southern Scandinavia.

Continuity in the use of certain sites through the late fifth and fourth millennia BC is evident across much of the British Isles, supporting the case for the widespread acculturation of indigenous people. At Ulva Cave on Mull, Argyll and Bute, for example, the base of a midden dates to 6640–6430 BC (GU-2600: 7660±65 BP) while the upper levels associated with pottery and cereal grain date to 3940–3660 BC (GU-2727: 4990±60 BP). Similarly at Wawcott in the Kennet Valley, West Berkshire, an area frequently occupied through the fifth millennium BC continued to see settlement well into the fourth as a hearth dated to 4350–3790 BC (BM-449: 5260±130 BP) and evidence of small-scale structures attests. Hunting and gathering clearly continued to make an important contribution to everyday subsistence during this transitional period (see below). Middens appeared in areas already occupied in the later fifth millennium BC and earlier. At Runnymede near Egham, Surrey, for example middens situated beside the River Thames partly overlay earlier occupation and included pottery which when analysed showed evidence for





**Figure 28** Carinated bowl (Grimston/Lyles Hill/Shouldered bowl/Plain bowl) pottery from the early levels at Broome Heath, Norfolk. [After Wainwright 1972, fig. 15, 16 and 17]

dairying, the collection of pig fat, and beeswax. Further upstream at Eton, Windsor and Maidenhead, three middens, one up to 80m long and dating to the period 3800–3500 BC, lay along a 3km stretch of riverbank in a previously well-occupied area.

Evidence for a continued interest in pits, shafts, and natural features in the landscape is also widespread. At Down Farm near Cranborne, Dorset, the collapsed doline was the subject of attention around 3960–3710 BC (OxA-8009: 5045±45 BP) when a hearth was built in the bottom of the part-silted hollow, while at Billown, Isle of Man, the shaft capped in the mid fifth millennium BC was the scene of further ceremonies around 3518–3034 BC (OxA-10300: 4570±65 BP) when fires were lit and people feasted before discarding their debris into the smouldering hearth (29). Something similar took place on Coneybury Hill to the east of Stonehenge, Wiltshire, about 4040–3640 BC (OxA-1402: 5050±100 BP). A large pit 2m in diameter was cut 1.2m into the solid chalk as the setting for a feast held round about. At its conclusion, debris was dumped in the bottom of the shaft and the hole backfilled. As well as the remains of more than 40 pottery vessels and a selection of flint tools used for hunting and butchering animals, there was a rich assemblage



**Figure 29** Billown Quarry Site, Isle of Man. Early to mid fourth millennium BC ceremonial shaft with the upper fill removed in quarter-section. [Photograph by Timothy Darvill (Billown Neolithic Landscape Project). Copyright reserved]

of animal remains that Mark Maltby interpreted as a major episode of butchery in which at least ten cattle, several roe deer, a pig, and two red deer were killed and dismembered for consumption on the spot or, in the case of the cattle and red deer, preservation for later consumption elsewhere. There was also the remains of a beaver and a brown trout perhaps taken from the nearby River Avon. Small amounts of emmer wheat were also found. A similar pit has been found at Rowden, Dorset, dated to 4360–3720 BC (HAR-5246:  $5250 \pm 140$  BP), and seemingly dug in a small woodland clearance. As well as Carinated Bowls it contained small amounts of wheat and barley and a faunal assemblage dominated by pig with lesser amounts of sheep/goat, cattle, and roe deer.

Ceremonies and festivities of the sort enacted at these places in the landscape may have played a part in mediating the relationships between incomers and local people, accelerating the process of acculturation and the spread of new ideas. Andrew Herne has suggested that at least some of the early Carinated Bowls were prestigious special-purpose artefacts used in feasting and ceremonies, and certainly examples were found in the pits and shafts already described. They are also represented at pit clusters, another kind of site that often shows continuity from the fifth through

into the fourth millennium BC. As the name suggests, these are groups of small pits that probably developed from periodic visits to a special spot when a hole was dug and backfilled for some ceremonial purpose, sometimes with the placement of a small object or deposit. At Roche, Cornwall, for example, ten pits in three clusters dated to the period 3790 BC to 3370 BC lay close to a prominent landscape feature with deposits in the pits including broken pottery, flints, a small saddle quern, and charred hazelnuts. Similar pit clusters resulting from seasonal gatherings that involved delving into the earth have been found near the coast at Potscatho, Cornwall, a liminal place near the end of the land and above the sea. In East Anglia some pit clusters reached extreme proportions and have sometimes been mistaken for settlements: at Eaton Heath near Norwich, Norfolk, there were 18 pits and 18 shafts up to 8m deep; at Kilverstone, Norfolk, there were over 200 pits from the period 3770 BC to 3500 BC; at Broome Heath near Ditchingham, Norfolk, around 70 pits associated with a large assemblage of Carinated Bowls loosely dated to 3618–3091 BC (BM-757: 4579±65 BP) were investigated; while at Hurst Fen near Mildenhall, Suffolk, there were more than 200 pits. At the other end of the country, at Fochabers, Moray, excavation of the Boghead Mound revealed 16 pits and hollows dating to 4040–3640 BC (SRR-685: 5031±100 BP) associated with spreads of white, red, and black sandy soil, and the smashed remains of more than 25 pottery vessels, most of them Carinated Bowls. Potentially the deepest and most ambitious adventure into the earth of this period is a 30m deep shaft or well on Wilsford Down, Wiltshire, where fragments of a wooden bucket from the bottom were dated to 3635–3112 BC (OxA-1089: 4640±70 BP).

Overall, a combination of limited migration, extensive interaction, and rapid acculturation accommodates the available evidence best. For some indigenous communities new blood through cross-cultural marriages may have been welcome, and the change from hunting and gathering to farming a relatively small step. For others localized factors such as food scarcities may have pushed them towards farming. And for everyone, underlying environmental factors may have played a part, especially climatic change during the Atlantic biostratigraphic phase (Pollen Zone VII) which seems to have become drier with a greater annual temperature range. How the embedded social institutions of local and immigrant communities coped with change can only be guessed at, but one of the challenges they faced involved new social pressures brought on by the changing values placed upon traditional resources. Two things came to dominate economic and social relations: the availability of land, and the control and reproduction of labour.

## FARMERS AND THEIR LANDSCAPE

At the start of the fourth millennium BC much of the landscape was still wildwood, albeit past its prime. In southern Britain the woodlands were dominated by alder, oak, elm, and hazel, while in western and northern areas birch and pine were more common. The very north of Scotland and the Western Isles may have already become treeless by the mid fourth millennium BC and

elsewhere there were extensive natural gaps in woodland cover. The range of animal species differed little from preceding millennia, although red deer populations had declined. The soils that developed under climax-forest conditions were rich, but locally variable. Soil fertility and prevailing vegetation must have been major factors in the choice of sites for settlement bearing in mind the need for cultivable land close at hand. Clearings made by earlier hunter-gatherer groups provided ideal spaces for early agriculture and seem to have been widely used.

The purely archaeological evidence is supported by the evidence from pollen spectra derived from lake sediments and peat bogs which suggests that small-scale disturbances to the woodland of the kind well represented in the fifth millennium BC became more numerous and larger through the fourth millennium BC. At Shippea Hill, Cambridgeshire, occupation deposits associated with Carinated Bowls were found sandwiched between a layer of peat dated to 4540–4000 BC (Q-584: 5465±120 BP) and one that seals the material dated to 4360–3804 BC (Q-583: 5295±120 BP). Analysis of the peat revealed that the local woodland was disturbed at a level contemporary with the appearance of the early pottery, and, most importantly, this disturbance was coincident with the appearance of several types of pollen indicative of the introduction of plant and animal husbandry.

## DWELLINGS AND FARMSTEADS

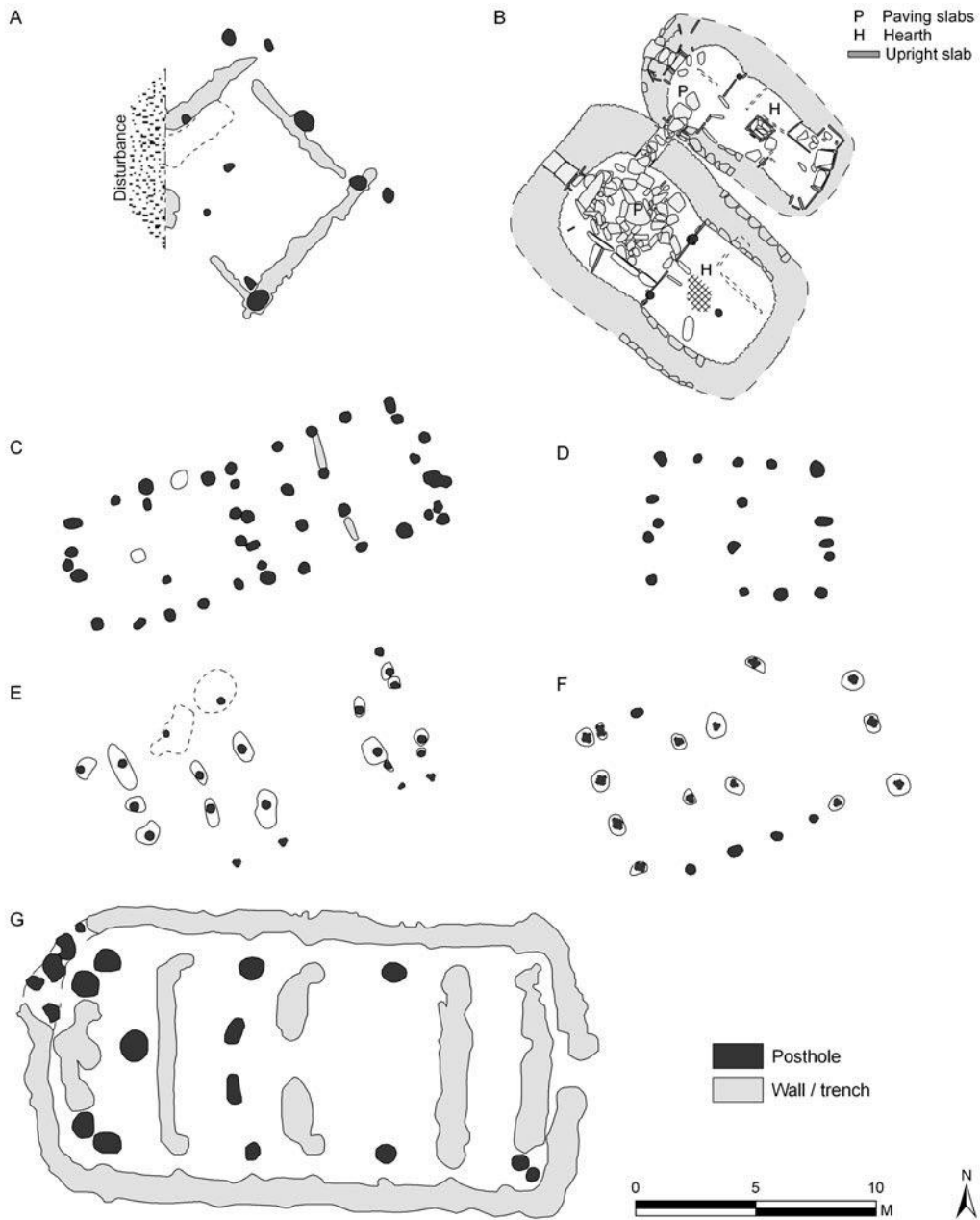
Farming activities throughout Britain in the fourth millennium BC revolved around small single farmsteads, often represented by scatters of pits, postholes, and gullies which can sometimes be hard to distinguish from pit clusters. Using such evidence many accounts of the period published in the 1970s and 1980s argued that early farmers were peripatetic and highly mobile. However, as a result of large-scale commercial archaeology and new research, more than a hundred dwellings are now known, some in considerable detail (Table D). Based on excavated examples there are clear regional variations in the size and form of the main buildings represented, although most are basically rectangular or square in plan. Some were built of stone, but the majority were timber structures whose sole surviving traces are the postholes in which uprights formerly stood (30).

The most impressive structures are found in eastern Scotland where their size has caused them to be referred to as ‘halls’. Twenty possible examples have been identified, mainly through aerial photography, and five have been excavated. Dating to between 4000 BC and 3600 BC they are typically between 22m and 27m long and between 8m and 11m wide. Timber-framed with a pitched roof, the main surviving features are the postholes from the central supports and wall lines which are usually marked by bedding trenches containing smaller postholes. Pottery and domestic debris are found scattered through the upper fills of constructional features and in occasional pits that concentrate outside the structure. The main space within such halls is usually arranged as four main sections with vestibule areas adjacent to doorways located at either end.

**Table D.** Recorded house sizes and floor areas for dwellings dated to the fourth millennium BC in five regions of Britain. [Sources: various]

| Site                                             | Length (m) | Breadth (m) | Floor area (m <sup>2</sup> ) |
|--------------------------------------------------|------------|-------------|------------------------------|
| <i>South and eastern Scotland</i>                |            |             |                              |
| Balbridie, Aberdeenshire                         | 22         | 11          | 242                          |
| Claish, Stirling                                 | 24         | 8.5         | 204                          |
| Locherbie Academy, Dumfries and Galloway         | 27         | 8           | 216                          |
| Sprouston, Borders                               | 21.5       | 7.5         | 161                          |
| Warren Field, Aberdeenshire                      | 24         | 9           | 216                          |
| <i>North and north-west Britain</i>              |            |             |                              |
| Eilean Domhnuill (House H), Hebrides             | 9          | 5           | 45                           |
| Knap of Howar, Papa Westray, Orkney 1            | 10         | 4.5         | 45                           |
| Knap of Howar, Papa Westray, Orkney 2            | 7.5        | 3           | 21                           |
| <i>Midland and northern England</i>              |            |             |                              |
| Fengate, Cambridgeshire                          | 8.5        | 7           | 59.5                         |
| Lismore Fields 1, Derbyshire                     | 15         | 5           | 75                           |
| Lismore Fields 2, Derbyshire                     | 5          | 5           | 25                           |
| Willington A, Derbyshire                         | 8          | 4           | 32                           |
| Gorhambury, Hertfordshire                        | 9          | 7           | 63                           |
| Mill Street, Driffield, East Riding of Yorkshire | 8          | 7           | 56                           |
| <i>South and south-western England</i>           |            |             |                              |
| Kingsmead Quarry, Horton, Berkshire              | 11         | 6           | 66                           |
| Yarnton, Oxfordshire                             | 21         | 11          | 231                          |
| White Horse Stone Hill, Kent                     | 20         | 8           | 160                          |
| Haldon, Devon                                    | 6          | 5.5         | 33                           |
| Chigborough Farm, Maldon, Essex                  | 12         | 7           | 84                           |
| The Strumble, Goldhanger, Essex                  | 7          | 5           | 35                           |
| Ascott-under-Wychwood, Oxfordshire*              | 9          | 6           | 54                           |
| <i>Wales</i>                                     |            |             |                              |
| Llandegai 1, Gwynedd                             | 12         | 6           | 72                           |
| Llandegai 2, Gwynedd                             | 12         | 7           | 84                           |
| Clegyr Boia 1, Pembrokeshire                     | 7          | 3.5         | 24.5                         |
| Gwernvale, Powys*                                | 11         | 6           | 66                           |

\* Stratified below long barrows



**Figure 30** Ground plans of fourth millennium BC halls and houses. A: Fengate, Peterborough; B: Knap of Howar, Orkney Islands; C: Lismore Fields House A, Derbyshire; D: Lismore Fields House B, Derbyshire; E: Llandegai 1, Gwynedd; F: Landegai 2 (Parc Bryn Cegin), Gwynedd; G: Balbridie, Aberdeenshire. [After Pryor 1974, fig. 4; Ritchie 1983, fig. 3; Darvill and Thomas 1996, fig. 6.4; Barclay and Maxwell 1998, illus. 91]

At Balbridie near Banchory, Aberdeenshire, a substantial amount of carbonized cereal grain was found. Given the size of these structures, each of which could probably accommodate between 30 and 50 people, it is likely that they were both dwellings for shelter and protection, and communal gathering places for physical and spiritual sustenance. Usually, these halls were burnt down at the end of their use. Unlike anything else in the Britain, the closest comparison for these Scottish halls lies with the architecture of the Northern TRB, sites such as Flögeln (Lower Saxony), Germany, which although smaller at 12.8m by 4.8m has the same construction pattern and four-fold division of internal space.

Elsewhere in northern and north-western Britain houses usually have a footprint covering less than 50m<sup>2</sup>. The pair of houses at Knap of Howar, Papa Westray, Orkney Islands, provide a rare glimpse of the organization of these dwellings. Both had a single entrance in one of the short sides, and a passage linked them together. Each had a central square stone-edged hearth, and stone partitions subdivided the living space within each house into three areas. These may tentatively be identified as a sleeping area, a cooking and working area, and an open communal area. To the south at Eilean Domhnuill in Loch Olabhat on North Uist, Western Isles, investigations by Ian Armit in the late 1980s and 1990s revealed occupation from 3650 BC through to 2600 BC. The settlement was linked to the mainland by a causeway and in most phases occupation focused around one or two structures. The main house was rectangular with a central hearth and screens to partition off sleeping areas and workspaces. Cereals attest access to the surrounding landscape which also hosted grazing. Whether this farmstead was occupied all year round, or seasonally in association with other nearby sites, is not clear, but it was probably the main residence of a single extended family.

In northern and midland England farmstead settlements were characteristically sited in sheltered spots, often on well-drained soils, on low hills or in river valleys. A typical example came to light at Fengate, Peterborough, during the construction of an industrial estate in 1971. The focus of the settlement was a small house dated to 3940–3640 BC (GaK-4196: 4960±64 BP), roughly square in plan with evidence of large posts supporting planked walls set in bedding trenches. There was probably only one room, but there may have been a verandah on the east side. Pottery, serrated flint blades, scrapers, a sickle blade, and flintworking waste were found in the vicinity, together with part of a polished stone axe, a limestone pounder, and a fine shale bead. At Thirlings, Northumberland, occupation debris discarded in pits again included Carinated Bowls dated to 4450–3770 BC (HAR-877: 5230±150 BP) while postholes suggested at least one small structure.

In southern and south-western England longhouses again predominate and in a few cases are comparable in size to the Scottish halls; more typically their dimensions suggest occupancy by single family groups of perhaps 6 to 12 individuals. At Kingsmead Quarry near Horton, West Berkshire, a longhouse was discovered in 2008 during excavations by Wessex Archaeology. Dating to around 3800 BC, three pairs of massive postholes show the house had a timber frame, while gullies defined the line of the walls that appear to have been constructed from vertically set timber planks. Two large longhouses investigated by Oxford Archaeology at Yarnton,

Oxfordshire, and White Horse Stone, Kent, date to between 3900 BC and 3700 BC, and both showed evidence for the internal subdivision of space.

On the coastal plain of North Wales at Llandegai, Gwynedd, two aisled longhouses dating to the early fourth millennium BC have been excavated, one in 1967 and one in 2005. They stand 500m apart but on the same orientation and perhaps give a sense of the density that might be expected in favourable landscapes. Pits and postholes round about suggest domestic infrastructure such as drying racks, but could easily include totem poles and devotional structures. As with dwellings in southern England, and especially across the Irish Sea in Ireland, there was evidence for the internal subdivision of space into several rooms. On the hilltop of Clegyr Boia near St David's, Pembrokeshire, two rectangular structures were recorded in association with a midden containing 50 or more broken pots, flint tools, and animal bones.

The demands of subsistence activities have also left their mark as temporary settlements related to the exploitation of particular resources. Middens around the coast were variously reused while in the uplands traces of hunting camps and herders' refuges have been found. Caves were used wherever available, for example the Mendips, North Wales, the Pennines, and Scotland. The small amounts of pottery and flintwork found at these sites suggests short-term occupation perhaps for summer grazing on the high ground. At Moel-y-Gaer, Flintshire, the remains of a wooden windbreak surrounded by flint waste from repairing broken arrowheads and weapons dating to about 3944–3636 BC (SRR-497: 4944±40 BP) suggests a temporary hunting stand. Small flint scatters in other upland areas may betray similar sites.

Many of the settlements and farmsteads discussed here must have been surrounded by garden plots, paddocks, grazing areas, and of course patches of woodland that together provided food and raw materials.

## FARMING AND FOOD

For early farmers land became a critical resource. Their subsistence base was a combination of traditional hunting and gathering together with the small-scale cultivation of cereals – wheat and barley – and animal husbandry focused on cattle, sheep, and pigs. Naturally, the contributions from each source varied from region to region according to the potential of the local environment, but assessing this is extremely difficult because only the waste debris from food production, bones, carbonized seeds, and processing equipment such as querns and knives are represented in the archaeological record. It is easy to overestimate the place and significance of the domesticated resources in everyday life as some at least may have been considered 'exotic' and for use in prescribed circumstances rather than for day-to-day consumption. Indeed, the limited scale of forest clearances through the fourth millennium BC compared with later times suggests that these communities were mainly hunter-gardeners rather than the fully fledged 'farmers' so often depicted in museum displays and popular accounts.



## Animal husbandry

Herding of animals was practised throughout Britain. On sites in southern England cattle bones invariably account for the majority of the domesticated animal remains found, with lesser numbers of sheep and pig bones (Table E). Cattle also predominated in the Midlands and the west, but pig usually takes second place over sheep here, possibly reflecting a less cleared landscape in which both cattle and pig browsed the woodland. In northern England and Scotland bone is often badly preserved or totally absent because it has been dissolved by the more acidic soils. However, at Northton on Harris, Western Isles, sheep equalled cattle in importance, and pig was absent. The rather less wooded landscape of the far north may be responsible for this pattern as sheep depend upon open grassland for grazing.

Careful scrutiny of excavated bones reveals the marks left by carcass dismemberment and butchery. At Windmill Hill, Wiltshire, cut-marks made by flint knives were noted on some of the cattle skulls indicating that the animals had been skinned, presumably to retain the hide for use in making clothes and other items. All the domesticated animals were undoubtedly eaten as food,

**Table E.** Animal species representation in assemblages dated to the fourth millennium BC from southern Britain. [Sources: various]

| Site                                | Species     |          |                 |
|-------------------------------------|-------------|----------|-----------------|
|                                     | Cattle<br>% | Pig<br>% | Sheep/goat<br>% |
| Knap Hill, Wiltshire*               | 88          | 5        | 7               |
| Abingdon, Oxfordshire*              | 80          | 0        | 20              |
| Staines, Surrey*                    | 77          | 10       | 13              |
| Robin Hood's Ball, Wiltshire*       | 76          | 8        | 16              |
| Gwernvale, Powys†                   | 67          | 19       | 14              |
| Ascott-under-Wychwood, Oxfordshire† | 65          | 29       | 6               |
| Hambleton Hill (Main), Dorset*      | 62          | 17       | 21              |
| Windmill Hill, Wiltshire*           | 60          | 16       | 24              |
| Bury Hill, East Sussex*             | 60          | 26       | 14              |
| Offham Camp, East Sussex*           | 52          | 17       | 31              |
| Peak Camp, Gloucestershire*         | 52          | 28       | 20              |
| Northton, Harris, Hebrides          | 50          | 0        | 50              |
| Hambleton Hill (Shroton), Dorset*   | 48          | 26       | 26              |
| Hemp Knoll, Wiltshire               | 47          | 6        | 47              |
| Hazleton North, Gloucestershire†    | 34          | 29       | 37              |

\* Enclosure sites. Remainder are open settlements/occupation sites

† Pre-long barrow occupation levels only

but determining what the frequency of animal bones means for diet is more difficult. After all, the meat yield from one cow is much greater than from a pig. Detailed studies by Tony Legge of the age and sex structure of the cattle population represented by the animal remains from Hambledon Hill, Dorset, and other enclosure sites of early fourth millennium BC date in southern England, revealed a high percentage of young cows with few mature breeding-age females. This implies either a dairy herd rather than one maintained simply for meat production, or the selection of young female animals for slaughter during the conspicuous consumption of animals at ceremonies and festivals.

### **Crops and cultivation**

The agricultural side of farming is represented by seed and grain impressions on pottery, carbonized seeds and plant remains, traces of cultivation plots, and equipment such as querns and sickles used during crop processing. Seed impressions and carbonized plant remains give direct evidence for the species of plant utilized. On the chalklands of southern Britain emmer wheat (*Triticum dicoccum*), with lesser quantities of einkorn wheat (*Triticum monococcum*), was the staple crop, but barley (probably *Hordeum vulgare*) was also grown. Wheat was especially well-suited to the soil and climate of southern Britain, and to judge from the evidence from Windmill Hill, Wiltshire, the size of the grain compares well with wheat produced under modern conditions. The barley grains were much smaller compared with modern samples. Robin Dennell has suggested that in the fourth millennium BC, as now, different soils and terrain favoured cultivation of a different range of crops; wheat being dominant on the heavier soils in western areas whereas there was a greater contribution from barley on the lighter downland soils of south-eastern England. Emmer wheat was the main crop grown near Gwernvale, Powys, around 3980–3660 BC (CAR-113: 5050±75 BP), and at Aston-on-Trent, Derbyshire, a pit dated to 3860–3020 BC (BM-271: 4700±150 BP) contained a large quantity of carbonized grain, again mostly emmer wheat.

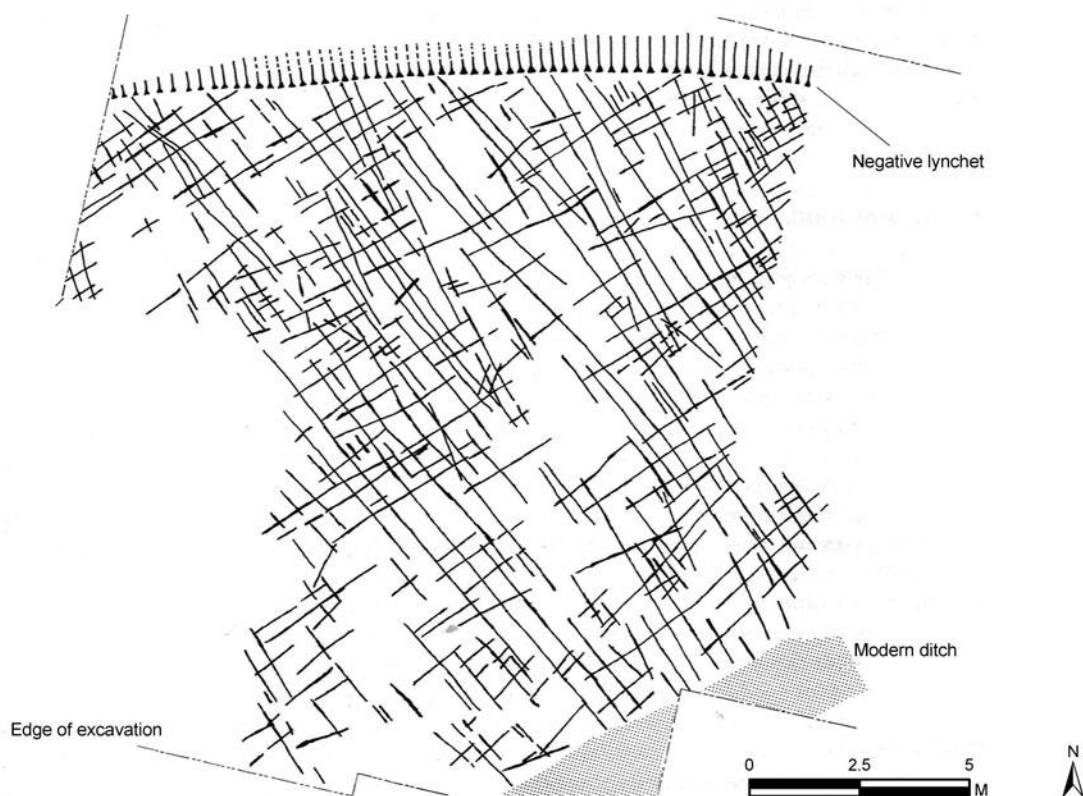
Flotation of soil samples from a pit outside the Stepleton Enclosure at Hambledon Hill, Dorset, brought to light a single grape pip of the cultivated variety (*Vitis vinifera*) radiocarbon dated to 3640–3100 (OxA-931: 4660±80 BP) and allowing the possibility that grapes were imported or that vines were grown nearby either to produce fruit for eating or making some kind of drink.

In northern Britain cereals were also a major part of the farming regime. At Balbridie, Aberdeenshire, an assemblage of more than 20,000 carbonized cereal grains, the largest group recovered from Britain, included emmer wheat (80 per cent), naked barley (18 per cent), and free-threshing wheat (2 per cent) and were found in association with a timber hall (see above) dated to the early fourth millennium BC. Slightly later is a deposit of over 300 seeds from inside the passage grave at Isbister, Orkney Islands, dated to second half of the fourth millennium BC. In this sample barley predominated, with only one grain of wheat positively identified. Ann Lynch, who carried out this analysis, also recorded seeds from weeds commonly found in cultivation plots,

including chickweed, curled dock, and corn spurrey which must have been harvested and processed alongside the cereals.

Examination of an old ground surface preserved beneath a long barrow at South Street near Avebury, Wiltshire, revealed traces of ploughing in the form of criss-cross grooves scored into the subsoil surface (31). They date to about 3910–3100 BC (BM-356: 4760±130 BP) and Peter Fowler believes they represent the practice of cross-ploughing with a simple ard, probably pulled by one or more oxen. No such ards have yet been found in Britain, but examples are known from the Continent. After a period of cultivation at South Street the ground was left open as pasture until the construction of the barrow several centuries later. Much the same has been recorded beneath other long barrows, for example at Hazleton North, Gloucestershire, and Kilham, East Riding of Yorkshire. Throughout Britain, settlement sites commonly yield quernstones for grinding grain and flint sickles with characteristic silica gloss along the cutting edge caused by harvesting cereals.

The impact of early farmers on the landscape was widespread. Almost every pollen sequence so far studied in Britain shows declining tree pollen levels in the centuries after 4000 BC. Elm is



**Figure 31** Ground plan of plough-marks revealed as grooves in the subsoil beneath the long barrow at South Street, Wiltshire. [After Fowler 1971, fig. 10]

often cited as one of the most distinctive indicators of clearance episodes, but analysis by Margaret Girling of the insect remains preserved in peat on Hampstead Heath, Camden, has revealed the presence of beetles of the type responsible for transmitting Dutch Elm Disease in deposits as far back as the early fourth millennium BC. In some cases at least a natural disaster may have been as important in changing the appearance of the remaining wildwood as early farmers.

Many early farmers exploited natural glades in the woodland, or areas cleared by cattle grazing, or by hunter-gatherer groups in earlier millennia. Clearing woodland by hand must have been a laborious procedure, expensive in terms of labour requirements, and involving ring-barking trees to kill them, burning the dead wood, and then clearing what was left with polished stone or flint axes. Broken axes must have littered the landscape in the fourth millennium BC and many thousands have come to light over the last few centuries. But not all were used solely for the peaceful task of forest clearance and woodworking (see below).

In western Britain it was not only trees which had to be cleared during the preparation of cultivation plots. Stones must have been a widespread problem and at Carn Brea near Redruth, Cornwall, excavations revealed that stone clearance had indeed taken place on small plots along south-facing slopes adjacent to a large enclosed settlement dating to the early fourth millennium BC. Evidence of clearance and associated cultivation is also known on Bodmin Moor, and in North Wales on Anglesey.

How land was owned and divided, whether it was communally or individually held, is not clear. However, once taken into use it remained so for long periods and there was investment in infrastructure. Fences have been reported beneath a number of later burial monuments, for example at the Beckhampton Road long barrow, Wiltshire, and Kilham, East Riding of Yorkshire. Indeed it is possible that many barrows were sited on boundaries to avoid causing disruption to farmland.

### ***Hunting and gathering***

Food was not derived entirely from farming. Wild fruits and nuts were gathered from the woods. Seeds of blackberries, sloes, crab apples, haws, and hazelnuts have been recorded from settlement sites. A particularly vivid insight into the misfortunes of someone collecting nuts came to light during the excavation of the Sweet Track, Somerset. A pottery vessel, originally full of hazelnuts, was found smashed where it had fallen beside a wooden trackway that led across the wooded marshland of the Somerset Levels. The contents lay scattered around, seemingly not recovered after the incident.

Animals were also hunted to supplement the food supply. Bones of red deer, horse, wild boar, wild cat, badger, beaver, hare, brown bear, wolf, and many other creatures have been recorded from sites around the country. Some may have served to vary the diet but others were hunted for their pelts or because they were unwelcome visitors to the homestead. Bows and arrows were extensively used in hunting, and from high in the Tweedsmuir Hills near Moffat, Dumfries and

Galloway, is a broken longbow made of yew dated to 4040–3640 BC (OxA-3540: 5040±100 BP), the earliest example yet found in Britain.

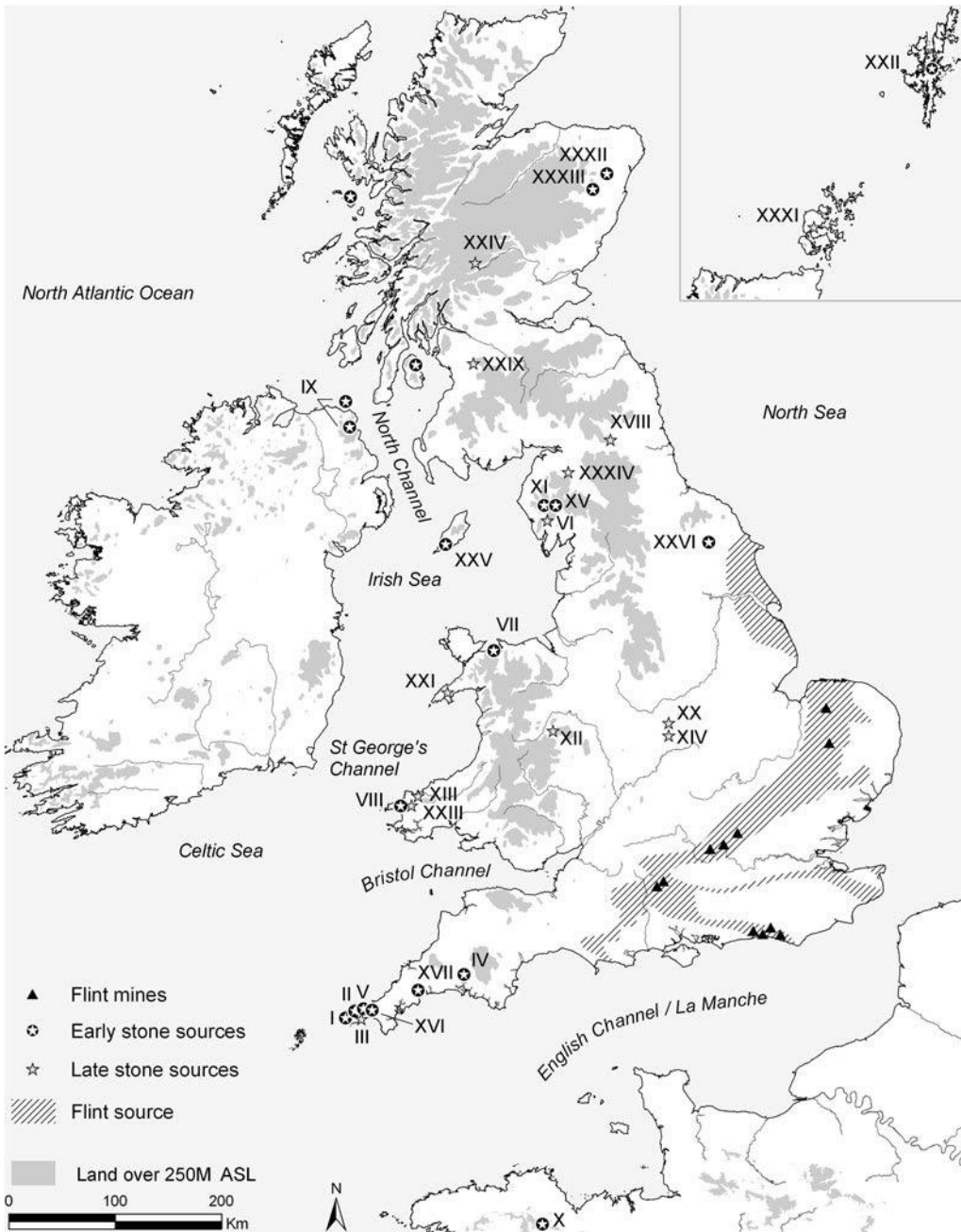
On the coast, marine resources continued to be used as a source of food, but seemingly less so than in earlier times. At Coygan Camp, Carmarthenshire, on the coast of south-west Wales shellfish were loosely associated with occupation dating to about 3980–3660 BC (NPL-132: 5000 ±95 BP), and at Knap of Howar, Papa Westray, Orkney Islands, a shellfish midden surrounded and underlay a settlement dating to around 3660–3370 BC (SRR-348: 4765±70 BP). In some areas fish was probably more commonly used than the archaeological evidence would suggest since fish bones are notoriously difficult to recover during excavation. However, analyses by Rick Schulting and Mike Richards of stable isotopes preserved in human skeletons suggest that most communities had very little to do with fishing during the fourth millennium BC, and may indeed have deliberately avoided seafood.

## TECHNOLOGY AND CRAFTS

Farming required skills and equipment not familiar to hunter-gatherer societies. As the relationship between people and their environment became more complicated, so did the technology to help control it. Being fairly permanently settled in order to tend crops and animals meant that size and weight of tools and equipment was less important than for societies continually on the move. But there were disadvantages in being tied to one place – for one thing the range of raw materials for making tools and equipment was less great. Thus it is notable that in areas where raw materials were scarce frugal use was made of every available piece. For example, Stephen Green has shown that flint leaf-shaped arrowheads tend to be much smaller in western and northern Britain than in areas where flint is plentiful. Likewise the amount of flintworking waste as a fraction of total assemblages tends to be less in non-flint-rich areas.

### *Flint and stoneworking*

Flint, as the principal material used for making edged tools, continued to be worked through the fourth millennium in much the same way as it had been in earlier times. Pressure flaking and fine retouching characterize many assemblages. Leaf-shaped arrowheads, scrapers, knives, axes, adzes, points/awls, and sickles were among the main types of tool made. Across much of southern and eastern England flint suitable for making smaller tools could be found on the surface, but larger nodules for making axes and finer implements could only be obtained by digging into a chalk hillside or by digging mines down to the prized nodules of natural flint which occur in bands within the upper chalk (32). The remains of some of these mines can still be seen, as for example as Cissbury, West Sussex. Mining started on the South Downs before 3500 BC with early sites including Church Hill at Findon and Blackpatch, West Sussex. Indeed the availability of fine



**Figure 32** Map showing the main sources of stone and flint used in tool-making during the fourth and third millennia BC. Roman numerals indicate sources classified by the Implement Petrology Committee as petrological 'Groups'. Early sources are those in use during the fourth millennium BC; late sources are those which come into use after about 3200 BC. [Source: Author]

flint on the Sussex Downs may have been an important factor in promoting cross-channel relationships in the early fourth millennium BC.

The techniques of mining followed methods established in northern France a millennium earlier. Mines and shafts up to 15m deep were sunk to the level of the best flint – the floorstone – sometimes cutting through and ignoring less good layers. Once the desired flint was reached, radial galleries were dug to follow the bands and maximize the return for the effort of digging the shaft. This must have involved many individuals and a considerable amount of time. Once a mine had been exhausted a new one was sunk nearby, the spoil being used to backfill the previous shaft. All this work was done using antler picks, ox-scapula shovels, antler rakes, and whatever wooden tools and baskets were available. These were in fact the main tools for all earth-moving tasks from ditch-digging to levelling terraces for cultivation.

In the west of Britain fine metamorphic and igneous rocks, which behave in much the same way as flint when struck, were obtained from surface outcrops and used to make a wide range of tools. As well as simple pit-mines, adits were cut into hillslopes to follow desirable seams of rock, and detached boulders that had fallen from crags or been transported some distance from their parent outcrops by ice movements were sometimes worked where they lay. Smaller items such as scrapers and knives were used locally, but many of these rock sources are better known for their polished stone axes. At the quarries extraction and primary shaping (roughing out) resulted in extensive spreads of working flakes and scree. These can still be seen in north Wales at Penmaenmawr, Conwy, and in the Lake District at Great Langdale, Cumbria. Over 30 different rock sources have now been pinpointed, across Britain from Cornwall to Shetland (32), and many more undoubtedly remain to be discovered.

How the stone quarries and flint mines worked in terms of access is not known. Specialist mining communities may have been involved, but it is more likely that people undertook the work in short stints as and when the demands of farming permitted. At Great Langdale, Cumbria, hammerstones from several geographically diverse sources suggest that people from various parts of the surrounding landscape visited outcrops which were perhaps seen as a communal resource. In all cases, however, final working of flint and stone tools seems to have been undertaken at settlement sites and enclosures. Polishers of different shapes and sizes are found widely across Britain, often formed from sandstone blocks which have good abrasive properties. One of the largest examples lies among a scatter of sarsen boulders within the Overton Down Nature Reserve near Avebury, Wiltshire.

### ***Pottery-making and other crafts***

Many other manufacturing activities took place at or near settlements. Pottery was made in a range of fabrics and forms according to the ultimate function of the vessel: cooking pots needed to have good refractive properties while porous storage jars were useful for keeping liquids cool. Vessels were fired in clamp kilns or bonfires. Petrological studies of the clays used suggest that

local sources available within a few kilometres of the settlement were widely exploited. Over time the distinctive early Carinated Bowls were replaced by new forms with more marked regional variations in style and decoration: Southern Decorated Wares in south-eastern England; Hembury Wares in the south-west; Western Wares in the west of England and Wales; Eastern Wares in northern England and southern Scotland; North-western Wares through highland Scotland; and North-eastern Wares in Orkney and Caithness.

Other skills evident at many sites include boneworking and stone-carving. Woodworking must have been the most widely practised craft, but its products are now almost entirely lost to us through decay. Many flint tools had handles or shafts. Houses, fences, and other structures were also made of wood. Rare glimpses of the range of wooden objects produced at this time come from the peat deposits of the Somerset Levels. Bowls, pins, figurines, boat paddles, long bows, arrowshafts, and a mallet are among the items recovered so far, but even this collection represents only a fraction of what was made from wood during the fourth millennium BC. Most important, however, is the evidence that woodworking skills included the ability to split trunks to make planks, and to cut mortise and tenon joints. No doubt these skills were also applied during heavy-duty carpentry such as house-building.

Woodland management is well demonstrated by evidence from the Somerset Levels. Oliver Rackham has shown that coppicing and pollarding were practised in Somerset before 3000 BC on the basis of wood recovered from trackways which not only includes coppiced poles but also the characteristic butt sections where a pole joined its stool. Coppiced poles have also been recovered from the waterlogged ditches of the Etton causewayed enclosure, Peterborough, hinting that the practice was very widespread.

The use of other organic materials includes furs for clothing, reeds for baskets and matting, and leather for containers, clothes, and other uses that can only be guessed. String and matting dating to the mid fourth millennium BC have been found at the Etton causewayed enclosure, Peterborough, where waterlogged deposits highlight the wealth of evidence missing elsewhere.

A natural propensity for practical skills probably meant that some individuals were specialists in one craft or other. Identifying particular skills with individuals is not easy but a rare example came to light during the excavation of the Hazleton North long barrow, Gloucestershire. Here an adult male was found buried with a quartzite hammerstone in his left hand and a partly used flint core in his right hand: a left-handed flintworker equipped in death as he was in life?

The technological abilities of early farming communities must not be underestimated. They had a rich empirical technology. Massive quantities of earth and stone were moved to make fields and build monuments and settlements, vast areas of woodland were cleared, and stones weighing up to 40 metric tonnes were moved during the construction of tombs and monuments.

## CAUSEWAYED CAMPS AND ENCLOSURES

Across many parts of Britain large earthwork or walled enclosures were built in the centuries after 3700 BC, variously called camps, causewayed camps, causewayed enclosures, enclosures, or

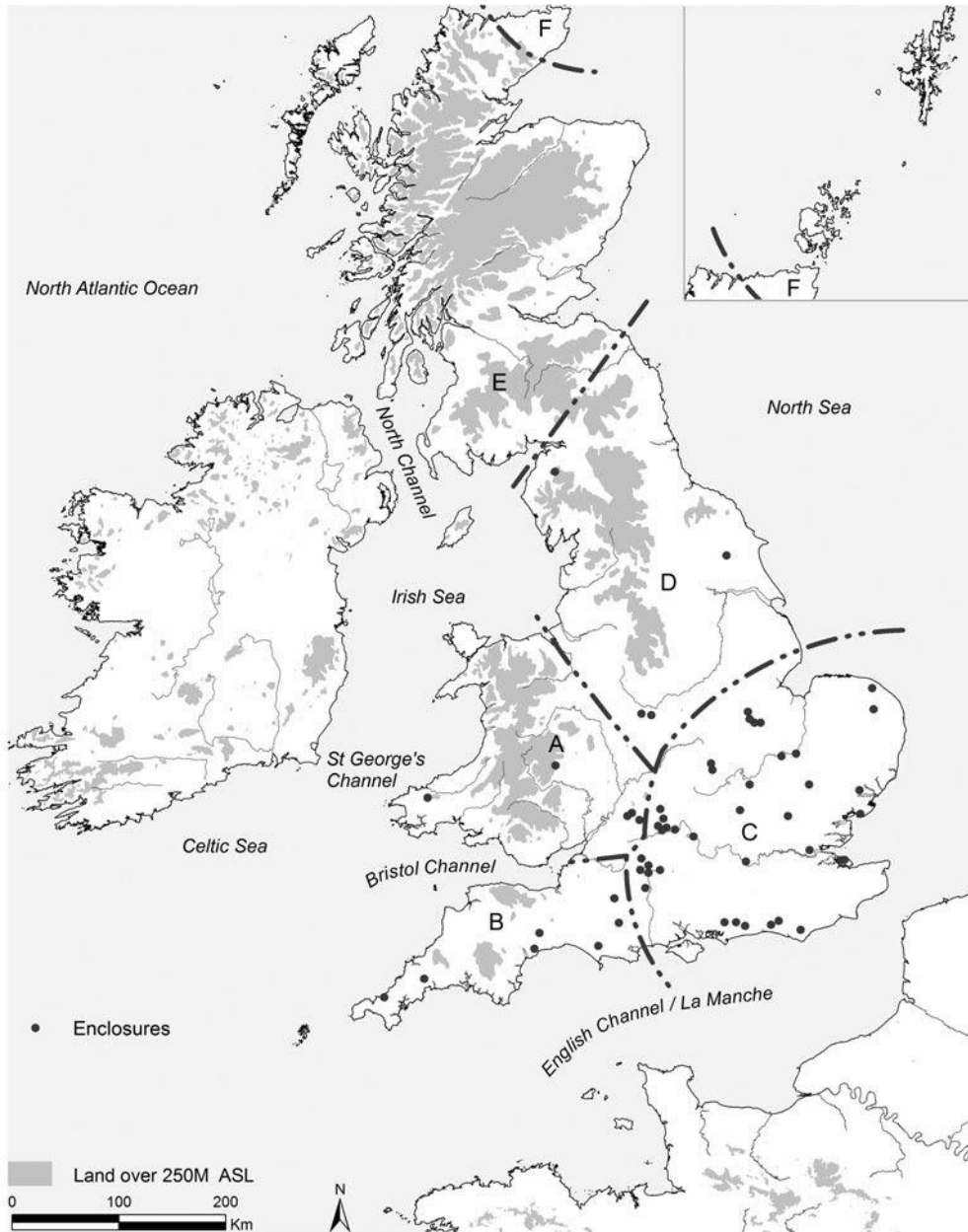


interrupted ditch systems. The terminology reflects the apparent diversity of field evidence while recognizing that the ditches defining many (but not all) were dug as a series of elongated pits separated by narrow causeways. Spoil from the ditches was used to build a rampart or wall inside the ditch, usually continuous except at the main entranceways. Largely thanks to aerial photography, the number of these sites known has doubled since 1970 so that over 100 examples can now be cited. Of course, not all have been confirmed by excavation and so far there are no convincing examples in northern England or Scotland (33). In southern Britain they occur in a variety of positions including hilltop and promontory situations, on hillslopes, and on valley floors. Many appear to have been built in light woodland or small clearances. Their size, construction, and the scale of the boundary ditches vary greatly. Similar enclosures are known on the Continent among the northern TRB in Jutland, the Michelsberg of northern France and the Rhineland, and the Northern Chaséen of western France.

Much debate has surrounded their interpretation and they have variously been seen as settlements, cattle enclosures, ceremonial centres, and periodic festival sites. Underlying these difficulties of interpretation is the fact that the sheer antiquity of the remains means many have been seriously damaged by ploughing since prehistoric times. In the west country, on the harder rocks of the Cotswolds and the south-west peninsula, preservation is better, while in the east of England low-lying examples have occasionally been preserved below alluvium. From excavations in these areas a more coherent picture is beginning to emerge which suggests that the enclosures performed a variety of functions, and that through time their role changed. Simple modern distinctions between settlements and ceremonial places are not especially helpful, and many enclosures can best be interpreted as settlements, either temporary or permanent, which also acted as meeting places and provided an arena for ceremonies and rituals.

An extensive dating programme led by Alasdair Whittle, Frances Healy, and Alex Bayliss has given new precision to the age and lifespan of enclosure sites. Some of the earliest are those in south-western England and south Wales. Hembury, Devon, for example, dates to 3715–3650 BC, Helman Tor, Cornwall, to 3845–3650 BC, and Banc Du, Pembrokeshire, to 3650–3490 BC. Carn Brea, Cornwall, is one of the best investigated in the region. Here, a massive stone wall up to 2m high was built around 3700 BC to enclose an area of about 1ha; it would have required at least 30,000 hours of hard labour to construct – a colossal undertaking. Free-standing and lean-to structures, probably houses, were built against the inside face of the curtain wall. Taking into account the number and size of house-platforms within the enclosure perhaps 150 to 200 people may have lived at the site at any one time. Roger Mercer, its excavator, interprets Carn Brea as a high-status settlement used for two or three centuries in the mid fourth millennium BC, perhaps linked to the production of prestigious stone axes. Three axe polishers were recovered during the excavations together with at least 11 finished axes.

Preliminary results from a long-term programme of research and excavation directed by Philip Dixon at Crickley Hill, Gloucestershire, suggests a similar type of site on the Cotswold escarpment. The sequence of building and change so far revealed is complicated. First, around 3600 BC, the enclosure was marked by a double line of interrupted ditches offering a boundary but not



**Figure 33** Map showing the distribution of mid fourth millennium BC enclosures and the spread of the main contemporary families of pottery. A: Western styles; B: South-western styles (including Hembury wares); C: Southern Decorated Wares (including Windmill Hill Ware, Abingdon Ware, Whitehawk Ware, Mildenhall Ware, etc.); D: Eastern styles; E: North-western styles (including Beacherra Wares); F: North-eastern styles (including Unstan Ware). [Source: Author]

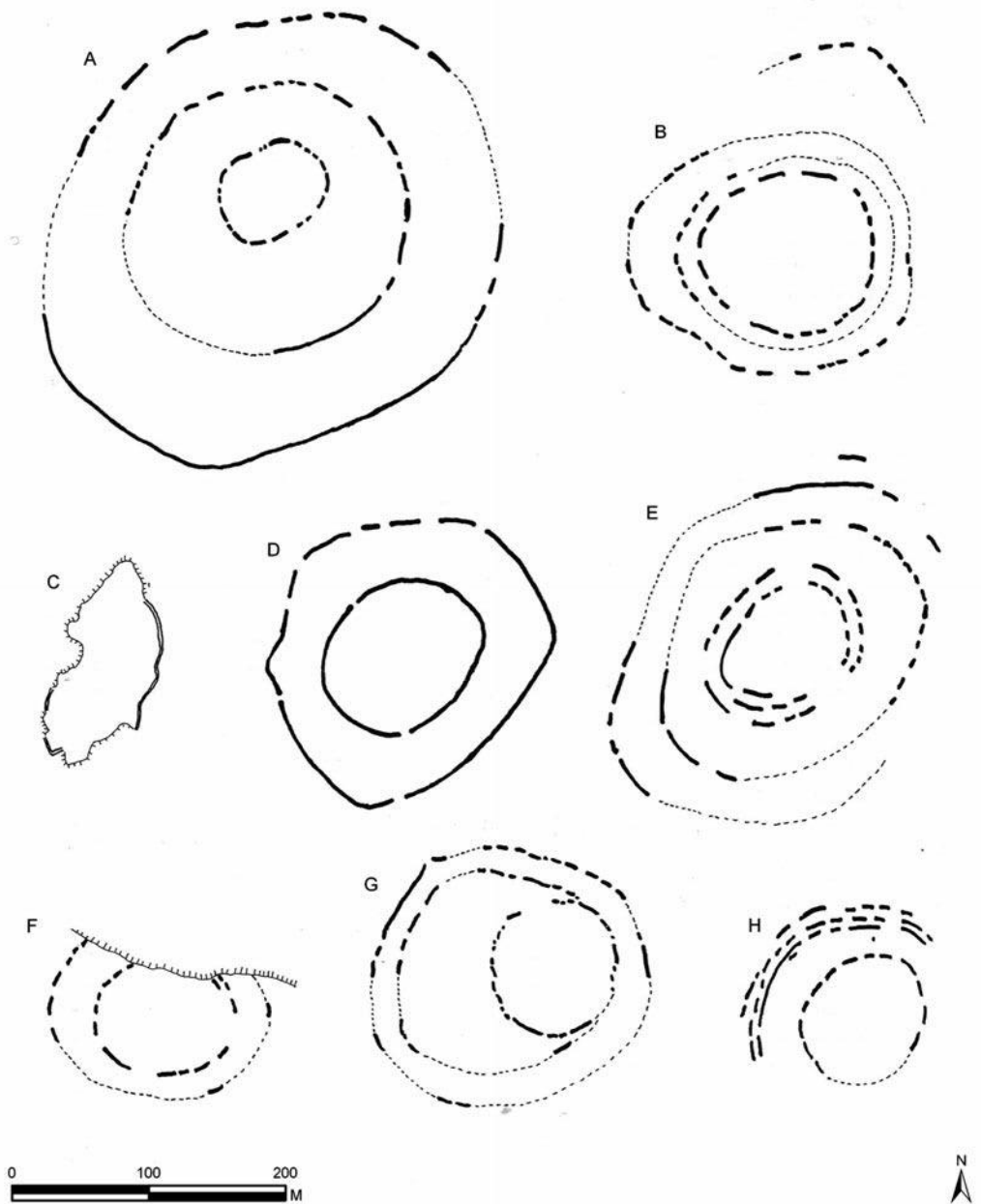
much defence. The ditches were recut several times on the same alignment over the course of several generations, but around 3550 BC a single, much deeper, ditch with just two entranceways replaced the earlier arrangements and transformed the site into a fortified village. Within the enclosure there is evidence for the careful organization of activities, with houses arranged beside pathways and areas set aside for flintworking, ritual, and other activities.

Crickley Hill illustrates two other features typical of these enclosures. First, situated on the Cotswold escarpment, it sits astride the junction of two markedly different environments; the Severn Vale to the west and the Cotswold uplands to the east. Graeme Barker and Derrick Webley identified similar contrasts in the land surrounding other enclosures and interpret this pattern as an attempt by the builders to be well placed for the exploitation of the widest possible range of landscape types. A second feature of Crickley Hill is that it has a neighbouring camp at the Peak, Cowley, only 1km to the south built and occupied at much the same time. Pairs of enclosures and even clusters of several sites together have been recorded elsewhere, notably in the upper Thames Valley, around Avebury, Wiltshire, and on Hambledon Hill, Dorset.

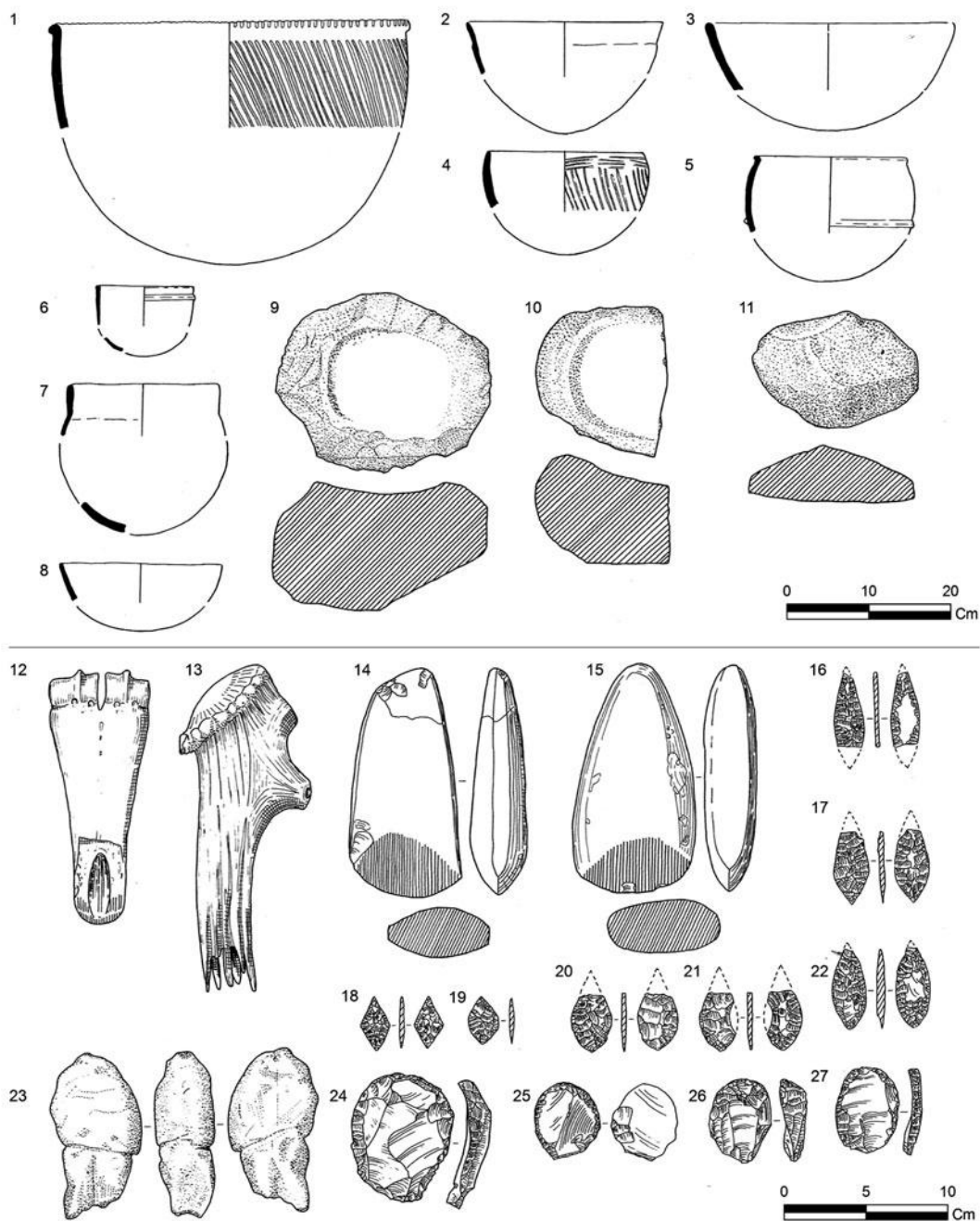
Carn Brea and Crickley Hill are small compared with other enclosures which average about 2.5ha (34). Many are much larger. At Maiden Castle, Dorset, a causewayed enclosure underlying the later hillforts covers about 7ha, about the same as the main enclosure on Hambledon Hill, Dorset. At Windmill Hill, Wiltshire, the outer of three roughly concentric rings of ditches encloses about 9.6ha. Built around 3650 BC, this site continued in use for three centuries. Its rich material culture (35) suggests heavy and regular occupation, perhaps seasonal, with the spaces defined by the various earthworks being devoted to different activities: socializing in the centre; transformative activities in the middle space; and interactions with death and nature at the periphery.

The interior of most enclosures contains a variety of features including houses, pits, and, on occasions, burials. Sometimes there is such a profusion of features that interpretation is difficult, while elsewhere severe erosion prevents full appraisal of the arrangements inside. Ditches usually prove rich in artefacts: broken pottery, animal bones, flintwork, axes and tools, and worn-out querns all lie discarded in deposits suggesting that the ditches were used as middens. Soil was occasionally thrown over these deposits, probably to stifle the smell inevitably associated with such dumps. This practice, coupled with the problems caused by the occasional collapse of the internal ramparts, necessitated periodic redigging of the ditches. At Staines, Surrey, pits, post-holes, and gullies were sufficiently numerous to imply intensive occupation that included rectangular structures. At Etton, Peterborough, the internal space was roughly divided into two areas by a fence, the northern entrance being marked by a post-built gate-structure. The main distribution of small pits with placed deposits lay around the periphery of the interior while larger pits with querns and axe-polishing stones lay towards the centre. Frances Pryor suggests that the deposits made within individual pits referred to a person's skills, while the adjacent ditch segment would represent that individual's family or kin group.

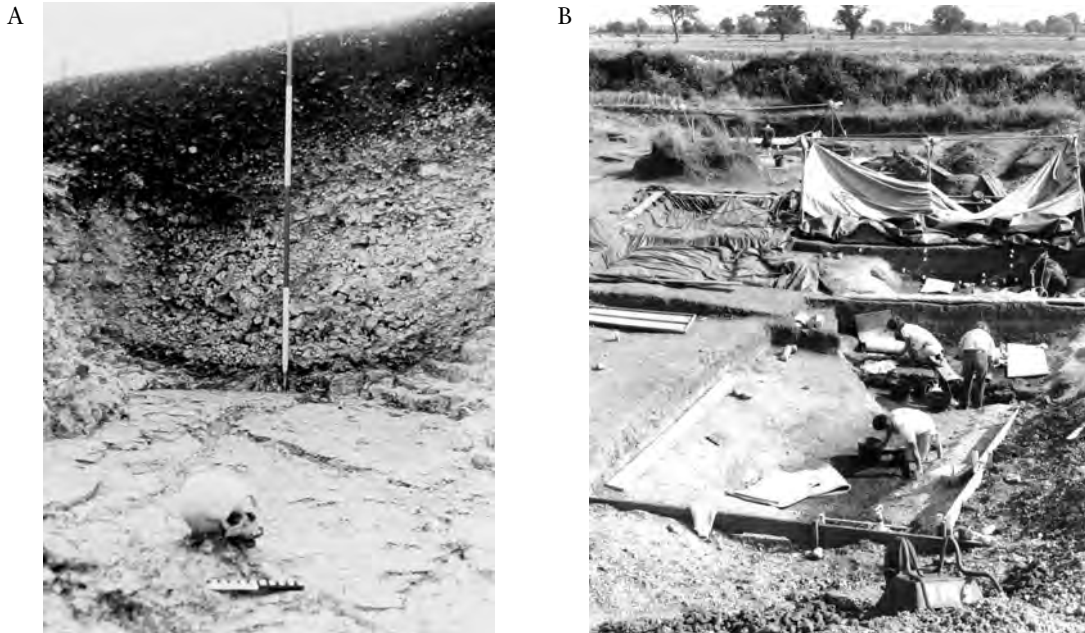
The redigging of ditches has been used as evidence to support the idea that enclosures were subject to periodic occupation, perhaps for festivals of some kind, when the population from scattered farmsteads gathered together at a central point. The regular spacing of enclosures on



**Figure 34** Ground plans of causewayed camps and related fourth millennium BC enclosures. A: Windmill Hill, Wiltshire; B: The Trundle, West Sussex; C: Carn Brea, Cornwall; D: Robin Hood's Ball, Wiltshire; E: Whitehawk Camp, Brighton and Hove; F: Coombe Hill, West Sussex; G: Briar Hill, Northamptonshire; H: Orsett Camp, Essex. [After Mercer 1980, fig. 4; Mercer 1981, fig. 3; Bamford 1985, fig. 20; Hedges and Buckley 1978, fig. 3]



**Figure 35** Selection of artefacts from the mid fourth millennium BC enclosure on Windmill Hill, Wiltshire. 1–8: pottery vessels; 9–11: querns and grinders; 12: bone chisel; 13: antler comb; 14–15: polished stone axes; 16–22: flint leaf-shaped arrowheads; 23: carved chalk fig.; 24–7: scrapers. [After Smith 1965, figs. 19, 24, 40, 45, 51, 52 and 53]



**Figure 36** Enclosure ditches under excavation. A: Human skull on the floor of the main enclosure ditch at Hambledon Hill, Dorset. Scale totals 2m. B: Semi-waterlogged deposits in the ditch at Etton, Peterborough. [Photographs courtesy of (A) Roger Mercer and (B) Frances Pryor (Fenland Archaeological Trust). Copyright reserved]

the chalklands in Sussex and Wiltshire adds further weight to this idea and it is tempting to suggest that such activities were responsible for the origins of many enclosures. However, over time some became more permanent, sometimes fortified, settlements. Certainly the evidence from Crickley Hill, Gloucestershire, would support this, but more excavations are needed to establish the extent of regional variations before firm patterns can be identified.

In addition to rubbish deposits, most enclosure ditches also contain deliberately placed deposits (36). At Etton, Peterborough, two pots had been placed on a reed mat in a manner suggestive of an offering of some kind. Human remains have been identified in the ditches of some enclosures. At Windmill Hill, Wiltshire, the complete skeleton of a child lay on the bottom of the outer ditch, and if the areas excavated are at all representative of the ditches as a whole then a dead population of about 100 individuals may be represented by complete or disarticulated skeletons round the periphery of the site. Similar evidence was recorded at the main enclosure on Hambledon Hill, Dorset, where bones including skulls were placed on the floor of some ditch segments. As Isobel Smith pointed out long ago, the remains present at enclosures are exactly the sort of pieces missing from long barrows (see below). Whether human remains at causewayed enclosure acted as guardians of the site, or were there simply out of convenience is not known. At a few sites, among them the main enclosure at Hambledon Hill, Dorset, the ritual components of

the ditch fills and the paucity of other evidence for domestic activities points to the exclusive use of these enclosures for ritual purposes.

Clearly, enclosures provided the scene for a variety of activities and generalization is very difficult. As already noted, the close connection between what might be described as ritual and domestic activities should, however, come as no surprise since in the minds of many primitive peoples the two are inextricably linked.

## MONUMENTS TO THE DEAD

Nowhere is ritual more strongly evident in the lives of these early farming groups than in their construction of monuments for housing and celebrating the dead. Many different kinds of structure are known, variously built from stone and/or timber, often reflecting regional traditions and perhaps the cultural origins of the societies who used them. Most required relatively little effort to construct and were probably built as family vaults; others are massive and monumental in every sense. Some are single-phase constructions, while others developed over the course of time as new elements were added. Importantly, these structures represent the earliest known architectural tradition in north-western Europe and six localized types can be recognized (37).

### *Dolmens and portal dolmens*

Some of the simplest monuments, known as ‘dolmens’, were made by raising a large block of stone above the ground, supported by stumpy-looking uprights known as ‘orthostats’. Such monuments are found mainly around the southern rim of the Irish Sea basin in Cornwall and west Wales. In some cases, such as Cerreg Samson, Pembrokeshire, there is evidence that the raised stone was an earthfast boulder that had been elevated over the spot where it originally lay. Such dolmens were never covered by cairns, although may have stood in the centre of a low platform or been surrounded by a low bank to set the structure apart and emphasize its presence. Dating is inevitably difficult as being open structures it is easy for later material to intrude. Excavations by Frances Lynch at Cerreg Sampson, Pembrokeshire, recovered an open bowl with similarities to Castelic pottery in Brittany and Normandy and hints at a date early in the fourth millennium BC.

A more elaborate style of dolmen are the so-called ‘portal dolmens’ or ‘portal tombs’ whose distribution includes south-western England, the north Cotswolds, Wales, and most of Ireland, where by far the greatest concentration is known. Characteristically, portal dolmens comprise four or more large upright slabs supporting a single capstone with the front of the tomb defined by three of the uprights set in an H-shaped formation. Most were surrounded by low platforms, with ready access into the space below the capstone. At Trethevy, Cornwall (38A), the massive

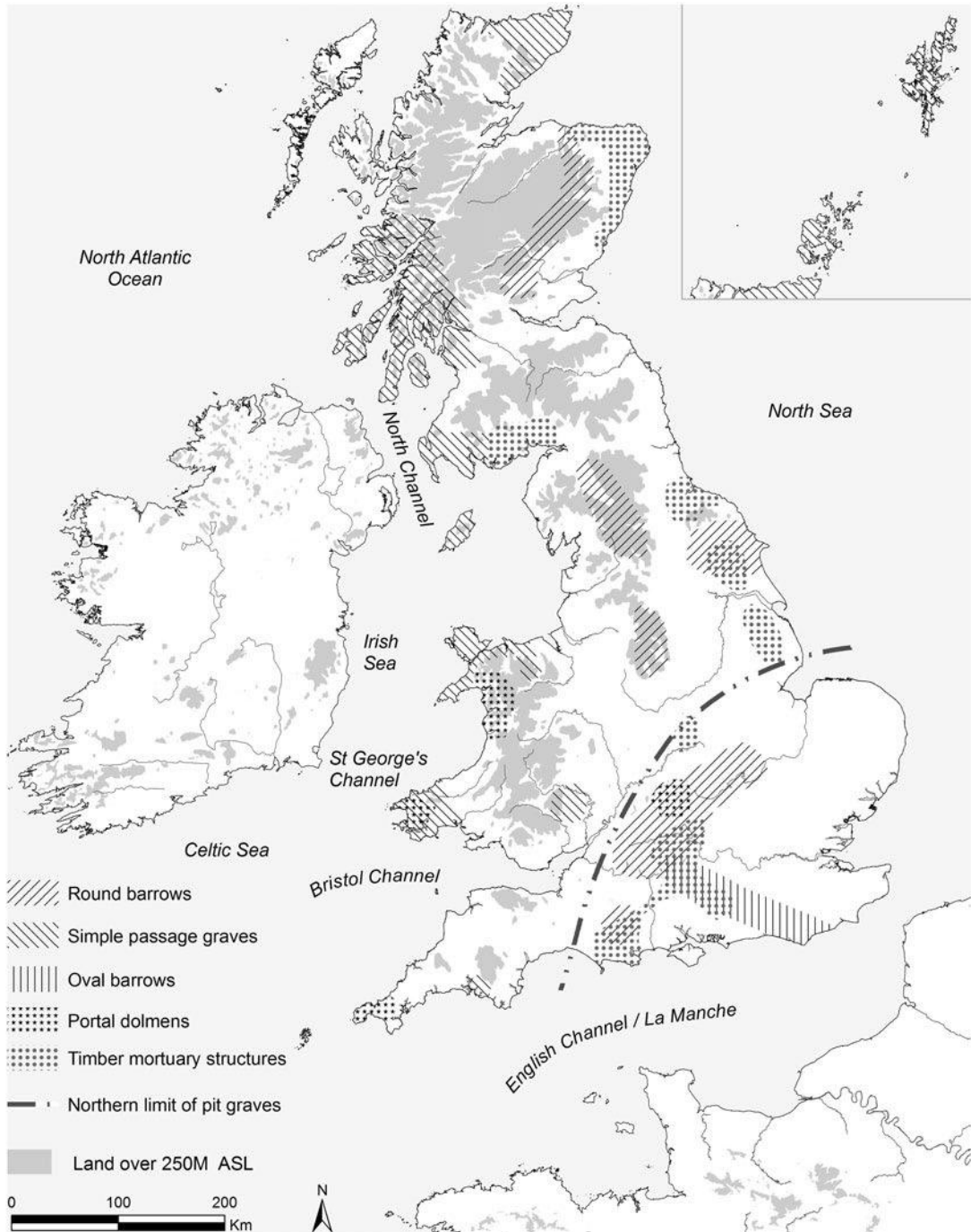


Figure 37 Map showing the distribution of fourth millennium BC burial monuments. [Source: Author]



A



**Figure 38** Fourth millennium BC stone and timber burial monuments. A: Trevethy Quoit, Cornwall (Portal Dolmen); B: Street House near Loftus, Redcar and Cleveland (Timber mortuary house with a U-shaped façade trench and a square kerbed mortuary enclosure beyond. Scales each total 2m); C: Pitnacree, Perth and Kinross (Round barrow). [Photographs (A and C) by Timothy Darvill; (B) courtesy of Cleveland County Archaeology Section. Copyright reserved]

B



C



capstone was perhaps selected because of a natural hole in one corner. Like the simple dolmens, some capstones may have been earthfast boulders raised above the place where they lay. At Pentre Ifan, Pembrokeshire, the pit in which the capstone once lay was found below the chamber during excavations in the 1930s. Rock art in the form of cup-marks is present on the capstones at Trelyfiant, Pembrokeshire, and Bachwen, Gwynedd.

Because dolmens and portal dolmens were open to the elements very little is known about the burial rites involved. Cremation was certainly practised at Dyffryn Ardudwy, Gwynedd, where half a dozen Carinated Bowls had been smashed and left in a pit immediately in front of the portal setting. Studies by Tatjana Kytmanow suggest that portal dolmens were mainly built in the period 4000 BC to 3500 BC, although some continued in use through into the later fourth millennium BC as radiocarbon dates on cremations and charcoal from inside the chamber at Cerreg Coitan, Pembrokeshire, attest.

### ***Timber mortuary houses***

Across eastern and southern Britain, where large stones for building are scarce, simple timber mortuary houses are well represented, usually as tent-like structures or timber boxes. When first built they would have been free-standing and some must have stayed that way. However, they are fairly ephemeral and most of those known have been preserved by being incorporated into later structures.

Timber mortuary houses were constructed by splitting a large tree trunk, generally oak, down the middle to provide a pair of D-shaped posts for either end of the chamber. Once the two posts were securely set in the ground a chamber was formed in the gap between using smaller timbers and panels of wattle-work. Splitting a tree to bracket a special space may encompass the same idea as creating a gap between the earth and a raised stone in dolmens and portal dolmens. Timber mortuary structures similar to those in Britain are well known among the northern TRB monuments of Jutland, especially those defined by Torsten Madsen as the Konens Høj Type.

At Pitnacree, Perth and Kinross, the timber mortuary house was 2.7m long, edged with boulders. Three cremations lay within and under the stone edging, while on the old ground surface round about were the remains of at least nine pottery vessels including Carinated Bowls. The structure was built around 3775–3570 BC (GaK-601: 4810±90 BP) and seems to have decayed naturally before a mound was built over the top (see below). At Dalladies near Fettercairn, Aberdeenshire, a mortuary house dated to before 3630–3352 BC (SRR-289: 4660±50 BP) comprised three central post-settings with a rectangular stone bank forming the edge of the structure and a pair of posts forming the entrance. A stone slab decorated with eight cup-marks lay in the centre of the chamber, perhaps originally propped against the central post-setting.

Further south at Street House near Loftus, Redcar and Cleveland, extensive excavations revealed

a basic timber mortuary house 7m by 1m elaborated by a façade of large posts with a kerbed platform perhaps for the excarnation of corpses behind (38B). As elsewhere, the timber structure, dated to 3630–3370 BC, was flanked by a low bank of clay and stone. At the end of its life the structure was set on fire and the relatively small amount of human remains within the timber mortuary house burnt along with the structure itself. Five cup-marked stones were found at the site in later contexts, possibly reused. Much the same style of mortuary house is known at Lochhill near New Abbey, Dumfries and Galloway, where a timber floor had been laid inside the chamber.

In southern Britain, the first phase of a multi-period structure at Wayland's Smithy, Oxfordshire, comprised a timber mortuary house. Excavations by Richard Atkinson and Stuart Piggott in 1962–3 revealed this to be a substantial structure 1.5m by 5m with a stone pavement forming the floor, flanked by a low rubble bank, and bounded at either end by a D-shaped oak post. On the floor were the remains of 14 individuals (11 males, 3 females, and a child) deposited about 3610–3550 BC. Fussell's Lodge, Wiltshire, excavated by Paul Ashbee revealed what can now be understood as a primary timber mortuary house built about 3800 BC and used for the burial of remains from corpses that had been exposed elsewhere, and in some cases burnt. At Nutbane, Hampshire, the primary mortuary house contained the remains of four individuals and seems to have been set within a square fenced enclosure. The example at New Wintles Farm, Oxfordshire, never seems to have been covered by a mound, but like Nutbane within a small ditched enclosure to give it prominence in an otherwise rather flat landscape.

### ***Round barrows/rotunda graves***

Across much of Scotland, north-eastern England, and a handful of areas further south, round barrows were the most common form of fourth millennium BC burial monument. Most simply comprise mounds of earth and stone, sometimes carefully layered, covering a central burial pit, cremation trench, closed stone chamber, or some kind of above-ground wooden chamber. Some were surrounded by quarry ditches, which often survive as ring-ditches even where the mound has gone. A detailed study of these monuments in the 1970s by Ian Kinnes catalogued more than 80 examples but suggested that as many as 20,000 might once have existed.

In some cases round barrows were built over the top of decayed timber mortuary houses, perhaps to cover them in a final act associated with the death of a particular individual or significant happening. Examples include Pitnacree, Perth and Kinross (38C), and Callis Wold 275, East Riding of Yorkshire. Other round barrows were built on virgin sites. At Achnacreebeag, Argyll and Bute, a polygonal stone cist made of boulders and drystone walling covered by a granite capstone lies in the centre of a round cairn 18m across, very like the round barrows of Brittany such as Mane-er-Hroeck and Castelic (Morbihan), France, with their closed central cists. Similarly, on the Cotswolds round stone cairns with a central cist are sometimes known as rotunda graves after the example found by Elsie Clifford at Notgrove, Gloucestershire. Here the cist contained the remains of an adult aged between 20 and 30 years at death, dated to 3696–3518 BC (WK-17179: 4816±43 BP).

### ***Oval barrows***

A variant of the round barrow involves covering the burial pit or stone or timber chamber with an elongated oval-shaped mound. Presumably the difference is one born of projecting a particular identity to the world as the basic arrangements inside are identical between the two traditions. Less widespread than round barrows, oval barrows are mainly confined to south-eastern Britain. At Wayland's Smithy, Oxfordshire, an oval barrow 14m by 7m was built over the decayed remains of the timber mortuary house in 3520–3470 BC, less than a century after its initial construction. Whether further burials were added at that time, or whether the group of five postholes at the southern end of the mound represented some kind of chamber or scaffold, is not known. The mound was made from chalk rubble excavated from flanking side ditches and was edged with sarsen boulders.

At Hambledon Hill, Dorset, a small oval barrow constructed in 3680–3640 BC lay 18m outside the main causewayed enclosure. The mound was roughly 33m by 15m and surrounded by a U-shaped segmented quarry ditch. When excavated the mound was heavily disturbed, but displaced material included the remains of at least four individuals that had probably come from a primary burial area in the central part of the mound. Other oval barrows of the early fourth millennium BC are known at Kingston Deverill, Wiltshire, and Thickthorn Down, Dorset, where a turf mound 26m by 12m was seemingly built without a burial chamber around 4050–3800 BC (BM-2355: 5160±45 BP).

### ***Simple passage graves***

Along the western coastlands and extending inland to a few areas such as the north Cotswolds and the Peak District of Derbyshire are a light scatter of simple graves of continental type that also occurred in Ireland at the same time. They are characterized by a round or slightly oval mound covering a centrally placed stone-built chamber that is connected to the outside of the mound by a straight passage, thereby allowing continued access to the burial area.

At Broadsands, Torbay, an example excavated in 1958 contained four small groups of human remains associated with Carinated Bowl pottery and worked flints, the earliest dated to 3900–3700 BC. Typologically, the monument finds strong parallels with sites such as Guennoc II (Finistère), France, dating to about 4000 BC and Pavia Type monuments in Portugal that are still older. In south Wales simple passage graves can be recognized at Ty-Isaf, Powys, and Bedd-yr Afanc, Pembrokeshire, while at Trefignath, Isle of Anglesey, the first monument constructed on an exposed rock outcrop is an example with an undifferentiated chamber and passage. On the Gloucestershire Cotswolds examples are known on Cow Common near Swell, and at Sale's Lot at Withington, where pieces of unburnt bone have been dated to 3656–3385 BC (WK-17193: 4799±39 BP) and 3516–3103 BC (WK-17188: 4589±49 BP). In the Peak District examples are

known at Mininglow and Five Wells, Derbyshire, while elsewhere in northern England there is a small example at Whitegrounds near Burythorpe, North Yorkshire.

Sometimes the passage cannot be differentiated from the chamber, as at Mid Gleniron I, Dumfries and Galloway, where two simple passage graves lay about 15m apart; both contained rectangular chambers built from large slabs of local stone. Further north-west at Achnacreebeag, Argyll and Bute, the early round barrow was remodelled and extended by the addition of a simple passage grave. No burial deposits survived in the q-shaped chamber, but there was a plano-convex flint knife, a flint flake, and the remains of three pottery vessels which all have close parallels with late Castellar pottery from Brittany and Normandy. Alison Sheridan suggests that the parallels are so close that a family of people perhaps moved from northern France to the Hebrides soon after 4000 BC.

On the Isle of Man a simple passage grave with a single chamber is known at Kew, while at Mull Hill six T-shaped chambers open from the perimeter of a circular mound in a manner that again suggests links with western France.

### ***Pit graves***

Burials are also found at a range of other monuments such as in the ditches of causewayed enclosures, in the shafts of flint mines, and, across south-eastern Britain especially, in simple pit graves. Some pit graves were probably associated with the creation of sacred spaces that were later occupied by more substantial monuments, as for example the burial dated to 3650–3370 BC (OxA-2403: 4745±70 BP) below the outer bank on the east side of Windmill Hill, Wiltshire, or within the causewayed enclosure at Staines, Surrey. Others seem to be isolated occurrences, as with the single burial of a woman on the banks of the River Thames at Blackwall, Tower Hamlets in East London, within a plank-lined pit loosely dated to 4230–3970 BC (KIA-20157: 5252±28 BP), with a Carinated Bowl placed over her head; a female accompanied by a complete pot buried in a pit at Pangbourne, West Berkshire; and at Handley Hill, Dorset, where a post was seemingly set up to act as a marker for the grave. More complicated is the pit grave at Fengate, Peterborough, where four bodies were found. They comprised a male aged 25 to 30, a female of about the same age, and two children. A leaf-shaped arrowhead found between the eighth and ninth rib of the adult male may have been responsible for his death, and it is tantalizing to speculate that here in this grave is a family group. More curious is that the male shot by an arrow was complete while the other three comprised partial remains, suggesting that at some stage elements had been removed perhaps for deposition elsewhere, possibly in a nearby long barrow.

### **LONG BARROWS**

Soon after 3800 BC a new kind of monument became fashionable across Britain, and remained so for two or three centuries (39). This is the long barrow, characterized by a large rectangular or

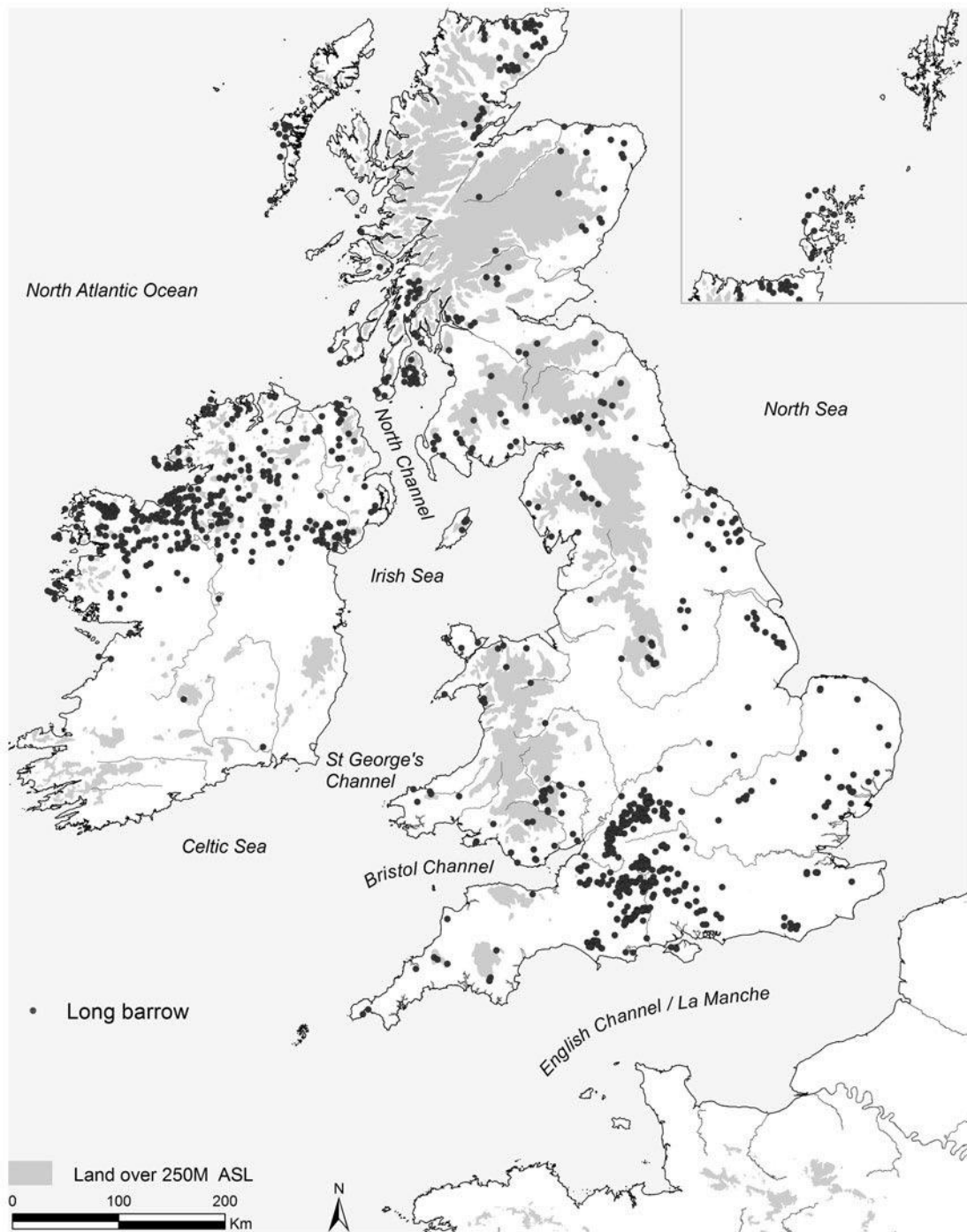


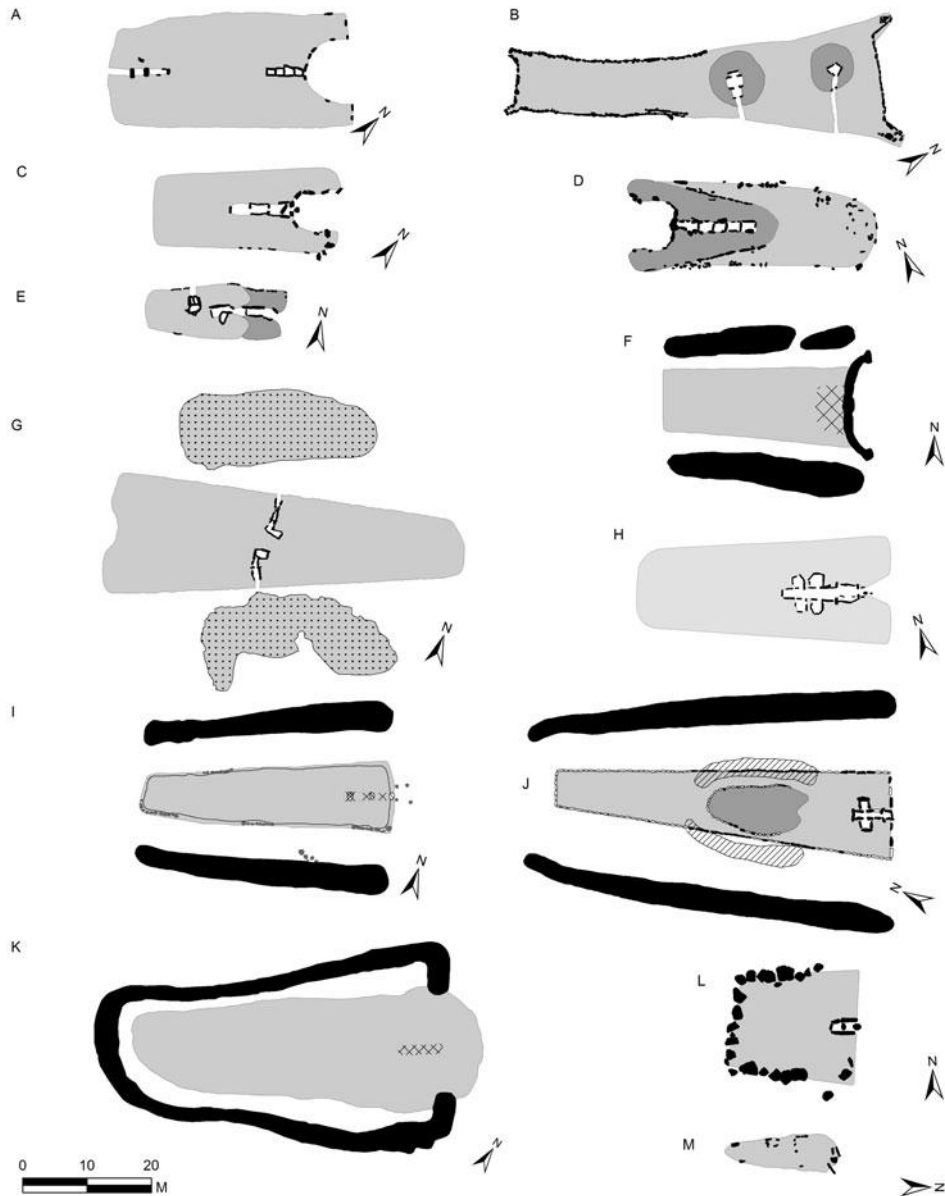
Figure 39 Map showing the distribution of long barrows in the British Isles. [After Darvill 2004, fig. 27]

trapezoidal mound usually covering one or more burial chambers. At one end of the mound there is usually a substantial façade of some kind, sometimes with a forecourt to form an arena for ceremonies. In some cases the chambers open directly from the façade or the back of the forecourt (terminal chambers) while in others the chambers open from the long sides of the mound (lateral chambers). Each chamber area typically comprises an entrance space, a passage or transit space, and one or more burial chambers or cells. Adjacent to the mound there are usually flanking quarry ditches or quarry pits that provided material for the construction of the mound. In the north and west of Britain the barrow-mounds tend to be cairns of stone with the chambers built from large stones or ‘megaliths’; in the east where building stone is less abundant the mounds are of rubble, soil, and turf while the chambers are made from wood.

Long barrows are often orientated roughly east–west, but it is clear that pre-existing monuments on the site sometimes override this rule, and local topography was also important as many are set near the top of steep slopes with broad views in some directions and very limited views in others. Broadly similar monuments are also known in Ireland and throughout the Atlantic coastlands of Europe from the Loire to the Baltic, as well as some inland areas on the Continent. Their origins are a matter of debate, with western France and southern Poland as possible source areas, but there is a long-held view that the inspiration for long barrows lies with the domestic architecture of their builders so that barrows effectively became the houses of the dead.

The largest specimens, like West Kennet, Wiltshire, or Na Tri Shean, Highland, measure 100m or more long, and while smaller examples are common, all represent a considerable amount of energy expended on their construction (40). Bill Startin has estimated that a medium- to large-sized long barrow represents anything between 7,000 and 16,000 person-hours of construction time depending upon the hardness of the local bedrock and the distance materials had to be moved. Whether this meant the work of many individuals for a short time, or a few individuals for a long time, or indeed several episodes of construction, is not known. Whichever the case, the work is the equivalent of ten people working an eight hour day, seven days a week, for between three and seven months.

In some places long barrows were added to what stood on the site already, covering it completely with wholly new chambers or sometimes extending and remodelling whatever existed. This multi-phase construction makes unpicking the sequence extremely difficult, especially when very little time elapsed between stages. Thus at Dyffryn Ardudwy, Gwynedd, a portal dolmen was encapsulated within a rectangular mound and a new chamber erected in the eastern end; at Notgrove, Gloucestershire, a round barrow was covered a generation or so later by a well-built trapezoidal mound, again with new chambers at the higher and wider eastern end; at Mid Gleniron I, Dumfries and Galloway, two simple passage graves were smothered by a rectangular cairn; and at Dalladies, Aberdeenshire, Fussell’s Lodge, Wiltshire, and Nutbane, Hampshire, timber mortuary houses were covered by large trapezoidal mounds that involved the extension of existing chambers or the construction of new ones. A similar sequence of events took place at Wayland’s Smithy, Oxfordshire, where a trapezoidal mound with new chambers in the eastern end completely covered the oval barrow sometime around 3460–3400 BC, just three or four



**Figure 40** Ground plans of long barrows in the British Isles. First stage monuments are shown in dark toning, later additions and extensions in light toning. A: Carn Ban, Arran, North Ayrshire; B: Camster Long, Highland; C: Carn (Co. Monaghan), Ireland; D: Cashtal yn Ard, Isle of Man; E: Trefignath, Isle of Anglesey; F: Raisthorpe, East Riding of Yorkshire; G: Hazleton North, Gloucestershire; H: Notgrove, Gloucestershire; I: Fussell's Lodge, Wiltshire; J: Wayland's Smithy, Oxfordshire; K: Haddenham, Cambridgeshire; L: Coldrum, Kent; M: Catshole, Cornwall. [After Darvill 2004, fig. 28]



decades after the first mound had been finished. Exactly the same thing can be seen on the Continent: at Prissé-la-Charrière (Deux-Sèvres), France, Chris Scarre has revealed a long barrow about 100m in length built around 4000 BC that succeeded an existing simple passage grave and a rotunda grave encapsulated within an intermediate rectangular mound. At Bygholm Nørremark (Horsens), Denmark, a timber mortuary house dating to the mid fourth millennium BC was succeeded by a long barrow 60m in length that was later extended to 80m and edged by a double row of kerbstones.

Elsewhere, both the internal structures and the long mound itself appear to have been planned as one unitary structure, coherent in design and constructed as a single operation. Examples include Hazleton North, Gloucestershire; Ascott-under-Wychwood, Oxfordshire; Haddenham, Cambridgeshire; and Raunds, Northamptonshire. These represent new foundations in the period when the fashion for long barrows was at its height, although many overlies evidence of earlier settlements, cultivated ground, or both.

More than a thousand long barrows are extant across the country, especially where they have not been disturbed by later activity. Their widespread distribution reflects the expansion of farming settlement between 3800 BC and 3500 BC, and the size and scale of each monument may somehow reflect the surplus energy available to individual communities and thus indirectly relate to the prosperity of its builders.

Regularity in the design of long barrows strongly points towards the imposition of a new ritual imperative, but in practice almost every known example is different in one way or another – the shape of the chambers, the positions of the chambers, the size of the forecourt, and so on – because these were local monuments built by local people for local use. Broad regional groupings can be discerned on the basis of common styles in tomb design. Thus a Cotswold–Severn Group, North Wales Group, Clyde Group, North-eastern Group, Midlands Group, Wessex Group, and Medway Group can be recognized. Other than by the shape of the mounds or cairns, these tombs are linked by having some sort of forecourt arrangement at the wider and putatively higher end of the mound, and the fact that the chambers could be re-entered time and time again to insert additional interments.

### ***Burial deposits***

In all long barrows multiple inhumation burial was the general rule although burial areas typically represent only a fraction, often less than 5 per cent, of the total area of the monument. Up to 50 burials are represented in most long barrows, and detailed radiocarbon dating programmes at Hazleton North, Gloucestershire, West Kennet, Wiltshire, and Ascott-under-Wychwood, Oxfordshire, show that the remains accumulated over relatively short periods, typically less than 150 years. In some cases individual bodies may have been exposed to the elements while the flesh decomposed – excarnation, as it is called – before the bones were placed in the tomb and there is some evidence that already ancient remains were placed in some long barrows.

In order to accommodate more bodies in the tiny chambers, and in order to satisfy required rituals, skeletons were frequently moved about and dismembered, and bones piled up in what at first sight looks like an unordered jumble (41). Michael Shanks and Christopher Tilley have, however, shown that in at least some monuments great care was taken when sorting the bones, and that patterns of deposition represent an assertion of the collective basis upon which early farming groups operated, the denial of the individual and the differences between individuals in death.

There are of course exceptions. Two sites near Avebury – South Street and Beckhampton Road – were found to be devoid of burials when excavated, and indeed no provision in the way of chambers to take bodies had been made. A third site in the same area, the Horslip barrow, may also belong to this class of chamberless long barrow, but ploughing had so reduced the mound prior to excavation that it is impossible to be certain.

Grave goods are sparse in long barrows. The occasional items present amount to little more than personal objects, beads, pendants, necklaces, and pottery cups or bowls. It is often hard to identify which individual was associated with which object because of the disarticulated nature of the burial deposits. Only about one in seven or perhaps one in ten of the interments could have been accompanied by grave goods, unless of course objects were removed subsequent to the burials being made. There is no suggestion of provisioning the dead for an afterlife; rather the tombs give the impression of being storehouses for the bones of the deceased – houses of the dead.

Arrowheads are often found among the burials, and in most cases were the cause of death of people in the tomb. At Ascott-under-Wychwood, Oxfordshire, a leaf-shaped arrowhead was fully embedded in a woman's spine, while at West Kennet, Wiltshire, a similar arrowhead was found in the area representing the thoracic cavity of an elderly male. Forensic-style investigations of the burial deposits by Michael Wysocki, Martin Smith, Megan Brickley, and others show that, as well as injuries caused by arrows, there are also numerous injuries consistent with a mixture of sharp-force and blunt-force trauma. This kind of wound could have been inflicted by a stone or flint axe; in about 2 per cent of all burials studied this was probably the cause of death, as in examples from Belas Knap and Rodmarton in Gloucestershire, and Boles Barrow, Wiltshire.

Upon excavation the forecourts of many tombs are found to contain fire-pits, hearths, and postholes. Human bones are frequently found scattered in these areas. Bones were also seemingly removed from the tomb and its vicinity altogether during these rituals, or perhaps they never arrived at the tomb in the first place. At Ty Isaf, Powys, for example, the three chambers contained the remains of a total of 33 individuals, but three humeri were the only complete long bones, and while the remains of seven skulls were found, 22 mandibles were present.

In many respects long barrows were tombs for the living. How they worked is becoming clearer as new investigations make greater sense of antiquarian records and scientific studies unravel details of the long barrow people and what happened to them. Given the diversity of burials in many barrows, one likely scenario is an annual festival or ceremony that involved opening the tomb so that all those who had died since it was last opened could be added. Some of these would be recent deaths and the corpses fairly complete; others may have been stored for a while; others

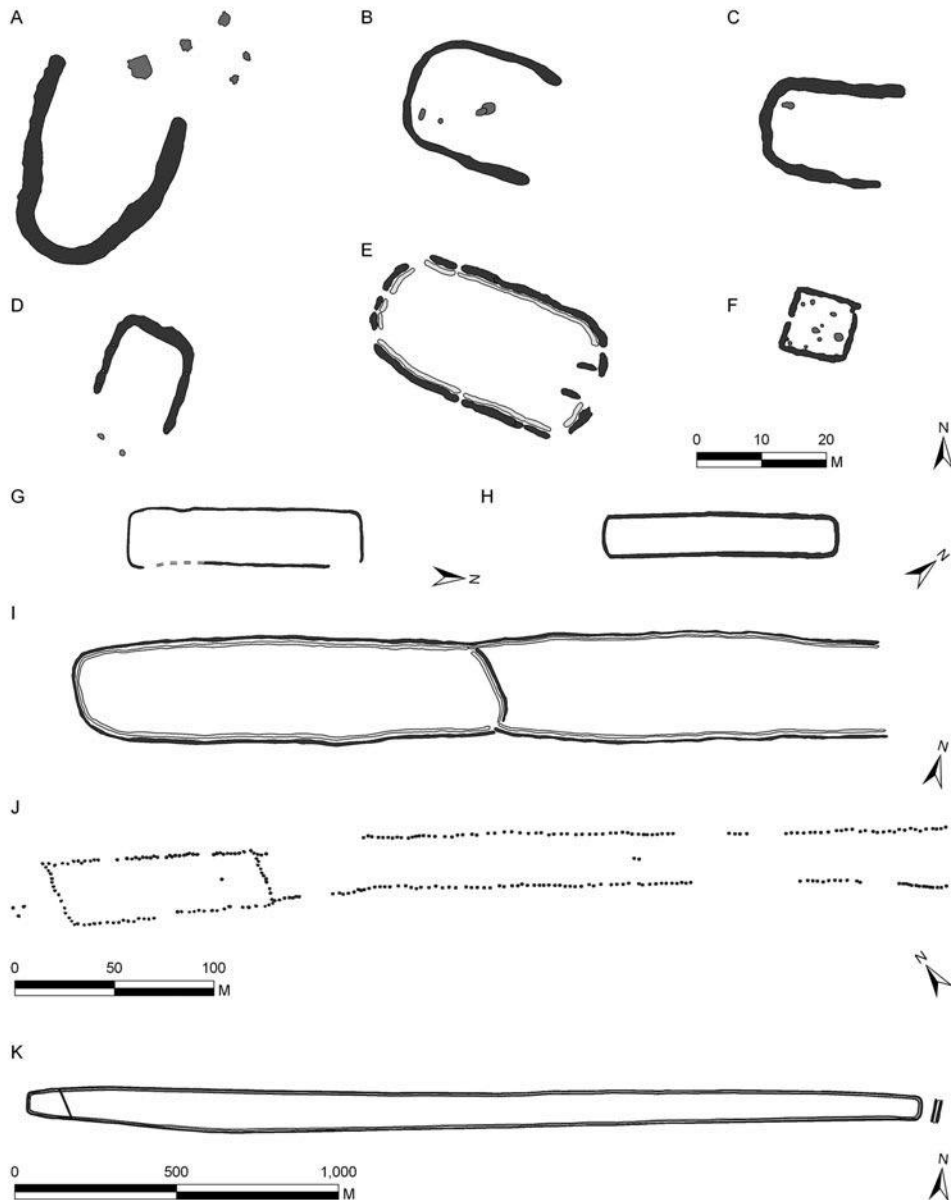
A



B



**Figure 41** Hazleton North long barrow, Gloucestershire. A: General view of the cairn after removal of the topsoil and overburden, looking east with the rubble-filled forecourt in the foreground. Quarry pits can be seen part excavated either side of the cairn. The two chambers, which cannot be seen at this stage in the excavation, lie immediately beyond the unexcavated cross-balk. Scales each total 2m. B: View into the north chamber showing the disarticulated burial deposit with skulls apparently preferentially placed around the chamber walls. Scale totals 30cm. [Photographs courtesy of Alan Saville. Copyright reserved]



**Figure 42** Ground plans of sanctuaries, long mortuary enclosures, and cursus monuments. A: West Hill, Uley, Gloucestershire; B: Barford, Warwickshire; C: North Stoke, Oxfordshire; D: Barrow Hills, Abingdon, Oxfordshire; E: Normanton Down, Wiltshire; F: Windmill Hill, Wiltshire; G: Site VIII, Dorchester-on-Thames, Oxfordshire; H: Raunds, Northamptonshire; I: Stonehenge Lesser Cursus, Wiltshire; J: Balneaves, Angus; K: Stonehenge Cursus, Wiltshire. [After Darvill 2004, fig. 84; 2006, fig. 26; Whittle *et al.* 1992, fig. 4; Harding and Healy 2007, fig. 3.40; Barclay and Maxwell 1998, illus. 71]

still may have been buried and then exhumed for reburial in the barrow; and others may have died a long way away and been cremated for ease of transportation back to their homeland.

The fashion for long barrows was fairly short-lived. Few were built after 3500 BC, and those still in use were often deliberately blocked up or subject to some final ritual event (see Chapter 5).

## SANCTUARIES AND LONG ENCLOSURES

Broadly contemporary with long barrows and causewayed enclosures, sometimes in close physical proximity to one or the other, are a series of ditched enclosures whose purpose is far from clear but which sometimes enclose a few pits (sometimes earlier or existing pit clusters) and which could be seen as some sort of sacred space or sanctuary. Shapes and sizes vary, and it is only recently that patterns have begun to emerge in what remains a very poorly understood collection of sites (42A–F). Some, such as the U-shaped enclosures found at Uley, Gloucestershire, Barford, Warwickshire, and North Stoke, Oxfordshire, may of course be the plough-cut remains of oval barrows. But at Radley, Oxfordshire, excavations by Richard Bradley showed that a succession involving a rectangular enclosure followed by a U-shaped enclosure loosely dated to the mid fourth millennium was primary to an oval barrow constructed in the early third millennium BC (see Chapter 5).

Square-shaped or rectangular enclosures are known at Windmill Hill, Wiltshire, immediately outside the causewayed enclosure on the east side, at the first phase at Radley already mentioned, and at Grendon, Northamptonshire. A rectangular structure at Nutbane, Hampshire, east of the timber mortuary house may have had a similar function, and is highly reminiscent of the square enclosure at Street House, Redcar and Cleveland, referred to above. Also relevant here are a series of post-defined enclosures typically 20m by 10m found in eastern Scotland which, like the Nutbane sanctuary, look very much like dwelling houses yet actually seem to play a role in mortuary ritual. At Balfarg, Fife, and Littleour, Perth and Kinross, excavations by Gordon Barclay led him to suggest that these structures had been used for the excarnation of corpses. Again, there may be parallels here between the architecture and design of houses for the living and the places inhabited by the dead.

Larger and more open enclosures are also known, as for example at Lower Lugg, Powys, where excavations by Alex Gibson revealed a sub-rectangular enclosure 40m by 30m with rounded corners and a wide entrance close to the southern corner. It was built between 3650 BC and 3350 BC, but activity at the site went back into the sixth millennium BC with a pit dated 6020–5800 BC (Beta-206284: 7060±50 BP) and continued into the third millennium BC with the deposition of cremated human bone. A long barrow lay 50m away to the south-east.

On an altogether different scale is the ditched enclosure at Godmanchester beside the River Ouse in Cambridgeshire. Constructed around 3960–3535 BC (OxA-3367: 4950±80 BP), this trapezoidal enclosure of 6.3ha measures 336m by a maximum width of 228m with an entrance gap opening to the north-east 168m wide. An internal bank helped define the boundary, inside

of which were 24 timber posts around the periphery which can be joined up to provide alignments on selected lunar and solar events.

More secure and more recognizable as a distinct and widespread class of monument are long mortuary enclosures (**42G–H**), a name given by Richard Atkinson to a rectangular ditched enclosure he excavated at Dorchester-on-Thames, Oxfordshire, in 1948–50. Orientated north-west–south-east, 63m long by 22m wide, with entrance causeways across the ditch and through the internal bank in the north-east, north-west and south-west sides, there was little evidence for any direct connection with excarnation as Atkinson thought, but it is a name that has stuck. More than 50 examples are now known, mainly in eastern Britain from Inchtuthil, Perth and Kinross, to Rivenhall, Essex. Most are defined by a bank and ditch, but in eastern Scotland there is a local tradition of building similar enclosures with post-edged boundaries, as for example at Douglasmuir near Friockheim, Angus, excavated by Jill Kendrick in 1979–80 and found to be 65m long by 20m wide. The construction and use of long mortuary enclosures continues through into the early third millennium BC as the example at Raunds, Northamptonshire, built 3350–2890 BC clearly demonstrates.

## **LONG MOUNDS AND CURSUSES**

The fashion through the middle centuries of the fourth millennium for building long barrows and long enclosures seems to have prompted a trend to create ever more extravagant linear monuments after about 3400 BC. Earlier distinctions are perpetuated as long mounds and elongated enclosures known as cursuses.

Long mounds, or bank barrows as they are sometimes called, are carefully constructed long narrow heaps of earth and stone, sometimes flanked by quarry ditches, which in general seem to have been created incrementally over a period of time that may amount to several centuries. Although closely connected with long barrows and earlier burial monuments, this is not always the case and it is typical of long mounds that there are no burial deposits directly associated with them, even though they frequently reference burial monuments through their construction or positioning.

The earliest long mound so far recognized is at Raunds, Northamptonshire, on the east bank of the River Nene where it forms one of the first structures in a small cluster of ceremonial monuments that perpetuate interest in the spot through into the early second millennium BC. The long mound was built in the period 3940–3780 BC, is orientated east–west, and is 135m long by 18m wide. Its construction involved laying out a pattern of fences to create cells that were then systematically filled with turf and topsoil scraped up from round about to create a low bank less than 1m high. With only slight refurbishment in one area, it remained in this form for millennia.

There were no quarry ditches for the long mound at Raunds, but in many cases long mounds were built from soil and rubble taken from flanking ditches which can sometimes be set well away from the mound. These sometimes survive even when the mound itself has long gone,

although in such a denuded state can sometimes be mistaken for cursuses (see below). Examples include Fordington, Dorset (75m); North Stoke, Oxfordshire (200m); Scorton, North Yorkshire (2,000m); and Stanwell, Surrey, (3,600m), where part of the monument runs beneath Terminal 5 at Heathrow Airport and was investigated during its construction.

Two long mounds – Maiden Castle, Dorset, and Crickley Hill, Gloucestershire – were constructed over the razed remains of causewayed enclosures. Excavations at Crickley Hill revealed a complex history during which the mound was enlarged and extended several times, possibly with soil brought to the hilltop from elsewhere. At the western end was a circular platform and at the east end an upright post. Traces of worn cobbling around the eastern terminal suggested to Philip Dixon, its excavator, that the monument was used for rituals involving processions up one side and down the other, although whether this can be applied to other long mounds is not yet known.

The extending of existing monuments to create long mounds is also widespread. At East Heslerton, North Yorkshire, for example, a tail was added to the conventional long barrow to create a mound 125m in length, while at Long Low, Derbyshire, two round barrows were joined to create a dumbbell-shaped structure 200m long. At Auchenlaich, Perth and Kinross, a bank barrow 322m in length has been created by joining at least two smaller barrows. And in Dorset, two long barrows at Pentridge were joined together to create a bank barrow nearly 155m long to rival two other bank barrows in the county at Broadmayne (185m) and Long Bredy (198m). The single most spectacular example of such aggrandizement is the Cleaven Dyke, Perth and Kinross, investigated by Gordon Barclay and Gordon Maxwell in 1993–7 (43). Here an early oval barrow was first extended through the superimposition of a long barrow, and then the long barrow was extended by the addition south-eastwards of a long mound between 1m and 3m high, 9m wide, set between flanking quarry ditches 50m apart. Careful study of the bank shows that it comprises at least 34 segments, each of which represents a separate episode of extension, ultimately creating a monument at least 2,085m long.

Cursus monuments are long rectangular enclosures formed by a pair of boundary ditches with internal banks and closed ends (42I–K). The name ‘cursus’ derives from the eighteenth-century idea that they were ancient racing tracks, and while there is no evidence at all to support such a view it is widely thought that cursuses were processional ways: lines in the landscape that linked special places or structured experiences of time and space which in some cases might have been seen as symbolic rivers. There are many similarities between long mounds and cursuses, although the latter most probably owe their inception to the idea of grossly magnified sanctuaries and long mortuary enclosures. This is a view supported by the evidence at Dorchester-on-Thames where two long mortuary enclosures were slighted when a cursus some 1,600m long was constructed in the mid fourth millennium BC. In other cases, for example the Dorset Cursus, Dorset, and the Stonehenge Cursus, Wiltshire, long barrows were incorporated into the design and usually lie at right angles to the main axis of the cursus.

More than 50 cursuses are known across Britain, often on low ground where they have been identified from aerial photographs. The largest is the Dorset Cursus which stretches for nearly



**Figure 43** Cleaven Dyke, Perth and Kinross. View along the central section of the long mound with flanking ditches along the edge of the cleared ground. [Photograph by Timothy Darvill. Copyright reserved]

10km across the grain of the chalk downlands of Cranborne Chase and dates from the mid fourth millennium BC. The ditches are about 90m apart, but rather than being of one unitary construction, this cursus is really two monuments set end-to-end, a feature which can be paralleled at other sites. The Springfield Cursus, Essex (44), is more modest in scale but typical of many at 700m long and 40m wide. Excavation of the eastern terminal in 1979 revealed pits, postholes, and evidence of burning.

In southern Scotland some cursuses are edged with lines of pits or postholes rather than a bank and ditch, as for example at Balneaves, Angus. Julian Thomas has argued that these provide the origins of the cursus tradition and that their form represents the symbolic transformation of one function of timber halls by creating large-scale spaces for collective performances.

Recent work has shown that within the class of cursus monuments there are in fact several different kinds of structure which can be differentiated on the basis of their lifespan and the way they were used. Frances Pryor has tentatively proposed three categories: the monumental or continuously used cursus such as the Dorset Cursus; the short-lived or single-period cursus such the Springfield Cursus, Essex; and long-lived episodic ditched alignments such the example at Maxey,



A



B



**Figure 44** Springfield Cursus, Essex. A: View of the eastern terminal under excavation; the cursus ditch has been half-emptied in alternating sections. One corner is in the foreground; the ditch along the short side of the end runs parallel to the left-hand side of the photograph. B: Reconstruction drawing of the cursus by Frank Gardiner. [Photograph and drawing reproduced courtesy of Essex County Council Planning Department. Copyright reserved]

Peterborough, which was dug and used in a series of short lengths sharing a common alignment but not necessary involving both of the parallel ditches at the same time. A variant on the episodic cursus may be represented by the repetitive ditch digging found at Bottom House Lane in Tring, Hertfordshire, where 40 parallel ditches on an east–west orientation were found during the construction of the A41 bypass. Only three or four may have been open at any one time.

Roy Loveday has recognized certain regional trends and notes how the terminals of early examples tend to be rounded and the sides rather irregular while later they are squared-off and the whole structure set out with great care and precision. He suggests that in some senses they should be seen as signalling devices to be read from above by the gods rather than on the ground by people dwarfed by their dimensions.

## NATURAL PLACES, STANDING STONES, AND ROCK ART

Cursus monuments often seem to reference natural features of the landscape such as springs and rivers, something which is fairly common during the fourth millennium and can be seen as an

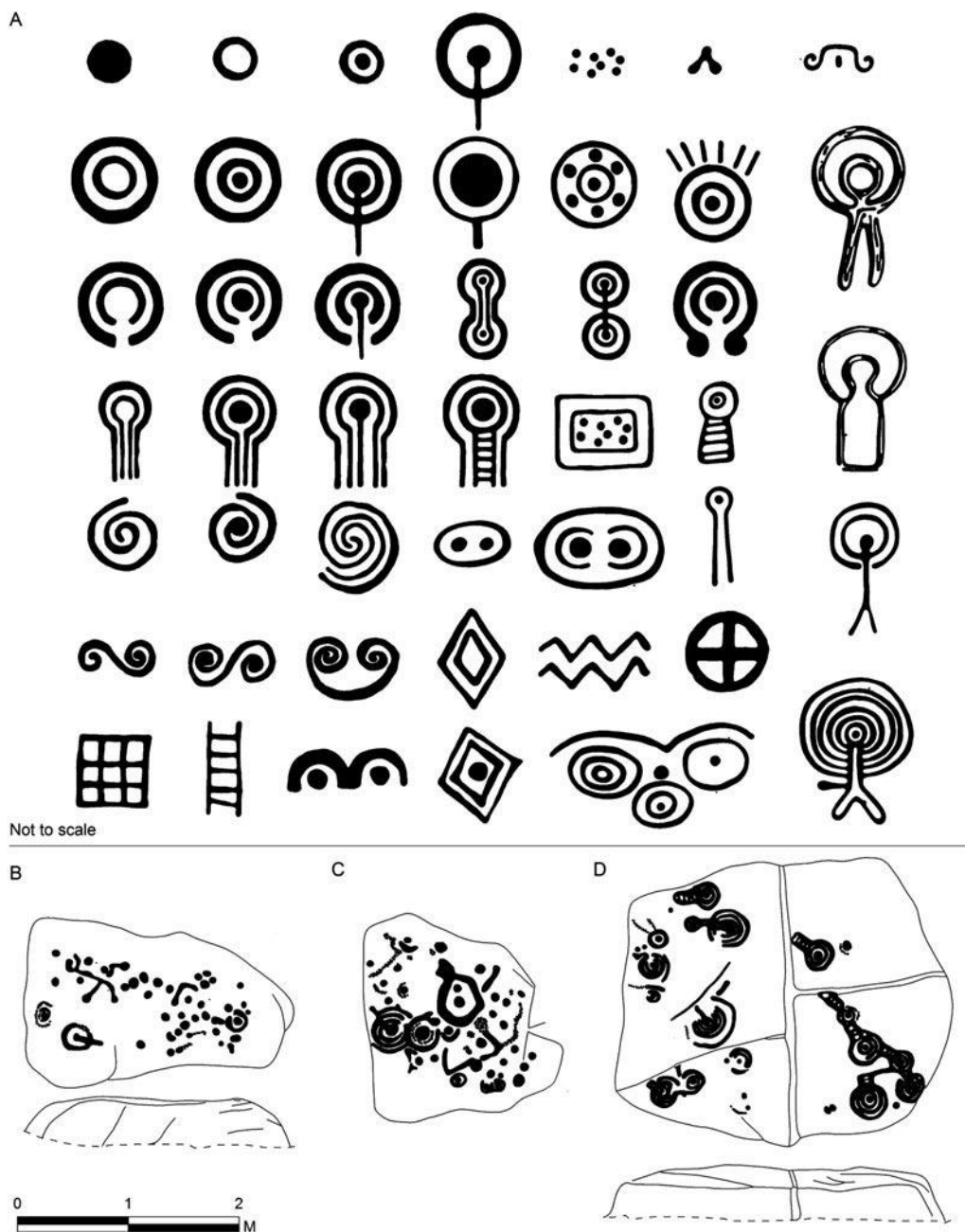
extension of the perceived need to delve into the ground through pit-digging and concerns for natural shafts and hollows. Caves were certainly explored at this time and items and burials left there. Rivers and lakes were certainly used for the deposition of human remains, and also for the placement of stone axes. It is possible that some of the timber trackways in the Somerset Levels and elsewhere (see below) were not so much to assist travel for hunting in the wetlands as to provide regular access to a sacred pool.

Stone was also of special interest to people at this time, not only in raising dolmens and portal dolmens to show off some fine boulders, but also in setting up standing stones. Such pillars are inherently hard to date, but the example that was toppled before the long barrow at Pentre Ifan, Pembrokeshire, was added to the earlier portal dolmen clearly shows that the tradition of standing stones starts early in Britain, mimicking perhaps in a modest way some of the huge menhirs erected across the channel in Brittany that culminated in the setting up of the 20m tall Grand Menhir Brisé at Locmariaquer (Bretagne), France. The menhir at Try, Cornwall, may be another early British example at 2.5m tall; also the monolith at Rudston, East Riding of Yorkshire, which stands 7.8m tall at the intersection of four cursus monuments.

Some standing stones, natural rock outcrops, and earthfast boulders were sometimes decorated with motifs in the cup-and-ring style of rock art, also known as the Galician Style (45). Dating is difficult, and it was certainly a long-lived tradition, but the presence of cup-marks on stones in timber mortuary structures and long barrows, and on the capstones of portal dolmens, strengthens the case for early dating. Panels on natural surfaces are especially numerous in Durham and Northumberland, where many have been recorded by Stan Beckensall during a lifetime of interest, and there are also many on Ilkley Moor, Bradford, and in south-west Scotland around Kilmartin, Argyll and Bute. The range of motifs used is considerable, and includes cups, singly or in groups, cups at the centre of curved grooves, including concentric arrangements of multiple grooves, rings, rosettes, lines (straight and wavy), chevrons, grids, crosses, key-patterns, wheel patterns, ladder patterns, and a range of circle and dot patterns some of which look rather like human faces. There is no doubt a grammar and a range of meanings behind these motifs, but they are now lost to us. Richard Bradley suggests that during the fourth millennium BC carved rocks acted like signposts in the landscape: images that could be read to understand the significance of a place or what lay ahead. Others see the panels as akin to maps of the landscape or the heavens.

## POPULATION AND SOCIETY

The human bones recovered from burial deposits allow insights into the structure of the population. Detailed anatomical studies of the bones from West Kennet, Wiltshire, by L H Wells provide a representative sample of the population at this time. In stature both males and females were marginally shorter than today. Adult males ranged from 1.57m to 1.80m in height while females ranged from 1.49m to 1.6m. Their build was similar to the range present today. Diseases



**Figure 45** Gallician style/cup-and-ring style rock art of fourth millennium BC and later date. A: Key motifs; B: Panorama Stone, Rombalds Moor, Bradford; C: Rombalds Moor, Bradford; D: Piper's Crag Stone, Rombalds Moor, Bradford. [After Morris 1989, fig. 1 and 2; Breuil 1935, fig. 40; Boughey and Vickerman 2003, figs. 212, 228, and 229]

were common. Arthritis, especially in the back, was the plague of the community. Hardly a single individual over 25 years of age failed to display some signs of the disease. Hands and feet were often badly effected. Spina bifida was noted in some individuals. The three most complete male skeletons all showed healed fractures of the upper limbs. Tooth loss before death was common, and a number of abscesses were noted. Infant mortality in early farming societies was high, and the average age of death may have been as low as 30, although some individuals lived well past 50. Infant burials are more common in enclosure ditches than in tombs, but nowhere are they numerous enough to account for all infant deaths.

Estimating population numbers for early farming groups is notoriously difficult, and there were certainly marked regional variations in the distribution of population. In the 1970s Don Brothwell considered that an overall population of about 20,000 for the British Isles would be appropriate on the basis of analogies with recent primitive agricultural groups. This is probably much too low, and given the very extensive evidence for settlement a figure in the region of 200,000 may be more realistic.

From the distribution of long barrows and the size of the settlements it would seem that Britain was populated by small-scale groups, perhaps extended family units widely spread across the countryside, with some larger communities occupying enclosures in certain regions. Monument-building, ritual, ceremony, and periodic gathering together for festivals seem to be key forces structuring the routines of daily life. Andrew Fleming has suggested that the very structure of long barrows, the cellular subdivision of the burial area and the arrangement of chambers, for example, may reflect the social organization of the groups that built them. Although in most parts of Britain the average number of interments is roughly the same, the number of separate chamber areas varies greatly from region to region. Thus in many parts of Wales and western Britain single chambers hint at small single-unit groups, while in southern and eastern Britain multiple chambers point to close-knit family units bonded into larger groups by kinship. An extreme case suggestive of a highly segmented society is represented by Mid Howe on Rousay, Orkney Islands, where 26 cells arranged as 13 pairs form the chamber of a kind of long barrow locally known as a stalled cairn.

Such small-scale autonomous groups are characterized by anthropologists as segmentary societies: repetitions of equivalent groups that are essentially self-supporting. There is very little evidence for ranking among early farming societies beyond the fact that interment in formal tombs was restricted and thus some kind of selection must have operated. Ian Hodder has argued that access to the tombs was related to the control of inheritance as a way of regulating claims to valued resources, particularly land as the main requirement for the production of food, and women as reproducers of the human population.

## EXCHANGE AND INTERACTION

Despite their apparent political autonomy, early farming communities were not isolated. Rivers and trackways provided lines of communication between groups and access to gardens,

monuments, and communal meeting places. At Runnymede, Surrey, traces of a landing-stage were found beside the Thames. On land, tracks would have looked much like those criss-crossing the countryside today, but in wet terrain wooden walkways were built. The most spectacular is the Sweet Track, Somerset, recorded for over 2km across the Somerset Levels between the Polden Hills and Westhay Island (46). It comprised oak planks, each about 3m long and 60cm wide, set end-to-end and held in place by pegs of hazel and alder. Dendrochronology on the



**Figure 46** The Sweet Track, Somerset. Part of the wooden trackway constructed in 3807–3806 BC across the marshy ground between the Polden hills and Westhay in the Somerset Levels. [Photograph courtesy of John Coles (Somerset Levels Project). Copyright reserved]

timber shows that it was built in the winter of 3807 BC or the spring of 3806 BC. There were no wheeled vehicles at this time, and a pedestrian could easily walk along the narrow planks.

Contacts between groups are also evident from artefacts found on fourth millennium BC sites that were made from materials only available many kilometres away. In general, such items can be divided into two groups: everyday items and prestige items. Heading the list of everyday items must be flint. Nodules up to 30cm across were carried, presumably by people or pack animals, from the chalklands of southern and eastern England to areas of western and northern Britain. There they were broken down into cores which in turn provided the starting point for making tools. Overall, thousands of tonnes of flint was moved in this way.

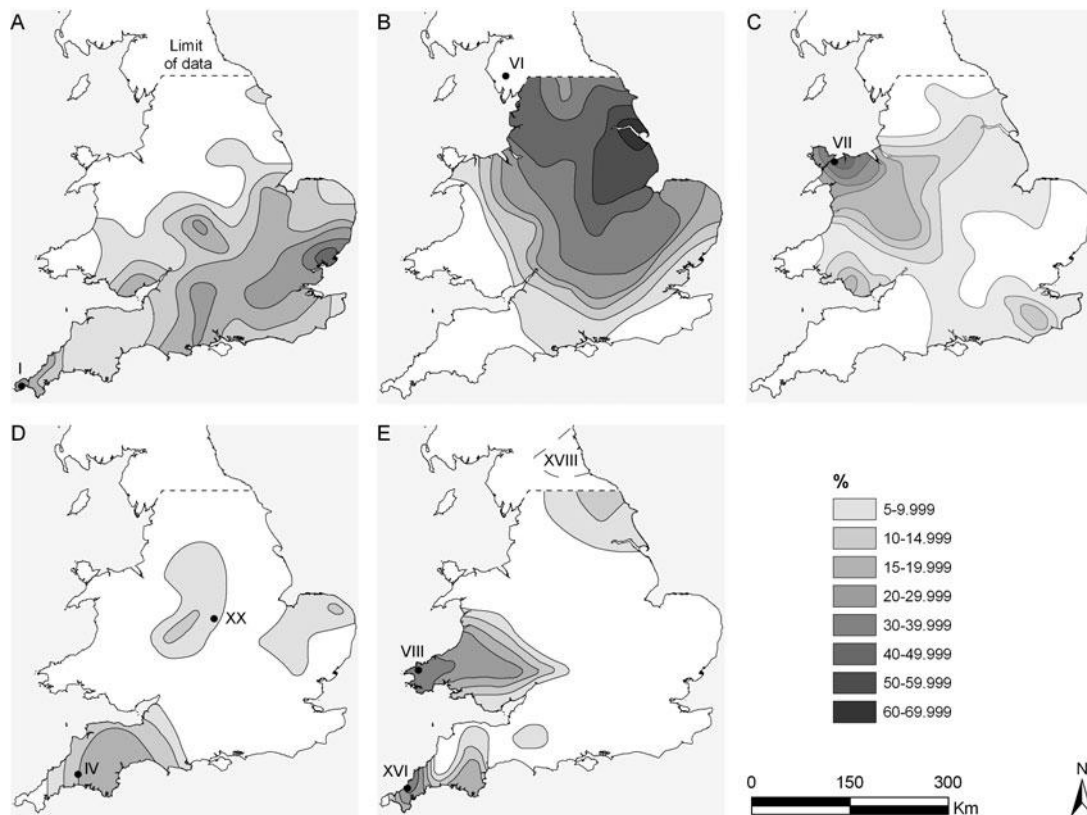
Quernstones can only be made from certain types of rock. Good sandstones and conglomerates were sought out and the products exchanged with other communities round about. Pottery too was sometimes moved considerable distances. Some of the pottery used at Windmill Hill, Wiltshire, was made from Jurassic clays available about 30km or so from the site. Petrological studies by David Peacock led to the identification of pottery made from gabbroic clays found only on the Lizard in Cornwall. This pottery was transported to most settlements and enclosures in south-western England, even as far afield as Dorset and Wiltshire.

Finely made flint axes were transported over much the same territories as flint nodules, while emanating from the stone quarries in the west of England, Wales, northern England, and Scotland were axes and other tools of fine igneous and metamorphic rocks that were also moved great distances. Axes of Cornish origin are fairly common in Essex, for example, and Arran pitchstone axes are widely spread around Scotland.

Axes from as far afield as Brittany, Northern Ireland, and Scandinavia have come to light at various times in Britain, emphasizing the continuing links between British farming groups and their counterparts in Europe and around the western seaways. Over 35 flint axes from Scandinavia have been found in Britain, some in hoards buried in pits, and including one from the long barrow at Julliberries Grave near Chilham, Kent. A very fine polished flint axe nearly 38cm long was found in 2006 on the Brown Bank in the Southern Bight of the North Sea off the Netherlands, possibly a prestige axe from the Continent lost in transit to Britain as several similar examples have previously been found in eastern England. Other prestige objects exchanged include shale beads and pendants which sometimes found their way into burial deposits as personal ornaments.

People recognized the significance of some of these exchanged objects and accorded them special attention. It is notable that some of the fine gabbroic pottery and best-quality axes concentrate on enclosure sites rather than smaller settlements. But paramount among objects singled out for special treatment must be jadeite axes, of which more than 100 are known across Britain from Cornwall to Orkney. They derive from sources at Monte Viso and Monte Beigua in the Italian Alps over 1,200km away and were exported from the early fifth millennium BC onwards. Some no doubt arrived in Britain soon afterwards (see Chapter 3), but a clue to the lasting significance of these items can be glimpsed from the fact that one was found buried immediately beside the Sweet Track, Somerset, possibly as a ritual deposit or a foundation deposit of some kind to ensure appropriate spiritual protection for the track and its users.

The mechanisms whereby goods came to be moved about and exchanged between communities during the fourth millennium BC were undoubtedly complicated. Grahame Clark suggested gift-exchange as the main agent of trade, and support for this derives from patterns in the fall-off frequency of goods measured against their distance away from their source when found (47). In gift-exchange one community passes goods to the next without necessarily expecting immediate repayment. Indeed repayment, or reciprocity, may be delayed for months, even years, and may take an entirely different form to that of the original gift – food, for example, may be returned for pots, cattle for women, or stone axes for a warrior. The important thing about gift exchange, and the thing that makes it so attractive to primitive societies, is that it makes groups obligated to one another. This in turn promotes alliances between groups and in effect creates a primitive insurance system whereby help can legitimately be expected from obligated groups during a time of crisis. Rare objects would be accorded the highest status and would be most sought after. The longer goods were in circulation, the wider their distribution, the further they moved, and the more value they acquired.



**Figure 47** Maps showing the distribution of stone axes in England and Wales. The contoured maps show the frequency of axes from particular sources (indicated) as a percentage of all stone axes known to date. Flint axes were not included in the analysis. [After Clough and Cummins (eds) 1979, 8–11]

## PEOPLE, LAND, AND WAR

From the evidence currently available it is possible to glimpse something of the lifestyles and the social organization of early farming groups in Britain. Taking the spatial distribution of the different styles of pottery, the distributions of dominant axe types, the clustering of enclosures, and the designs of the tombs it is possible to discern perhaps seven or eight regional groupings within which interaction may have been more intensive and common traditions bonded the population. In the south-west, the coastal fringes and the periphery of the uplands were the focus of early farmer settlements, while in southern England the chalklands of Wessex, the downs of Sussex, the Thames Valley, and the Cotswold Hills were among the most intensively settled parts of Britain. Upland Wales, the Pennines, and the Lake District may have served as summer grazing and source areas for fine stone, but most of the settlement was confined to the coastal fringes and upland peripheries. East Anglia was probably more intensively settled than current evidence suggests, while Lincolnshire, Humberside, and North Yorkshire were important foci of population and in some respects had already developed a distinctive culture by this time. In the north of England and Scotland settlement was mostly confined to the main river valleys and along the coastal fringes, dense on fertile areas, but generally rather sparse at this time elsewhere.

Common to most areas was the construction of monumental tombs. Since they cost dearly in terms of labour it is pertinent to enquire why they were built at all. Here the beliefs of these early farming groups were important. Communal monumental tombs undoubtedly had great symbolic meaning to their makers, were a source of pride to the builders and perhaps an object of envy to their neighbours. Colin Renfrew has suggested that long barrows may have acted as territorial markers for farming groups. By engraving their identity on a piece of land with a communal tomb farming groups symbolized or legitimized their rights to the land. By creating a repository for the bones of their ancestors, generation after generation could trace a direct link with the past and therefore with the ownership of specific areas of land. Such an arrangement may be interpreted as an ancestor cult in which the dead were thought to play an important role in the lives of the living. Ian Hodder has, however, taken the symbolism expressed by the tombs further than simply the functional exigencies of territorial symbols. He suggests that all aspects of burial and other rituals can be linked to the society's concern with legitimatizing control of resources through an ideology of communal work and collective participation in all aspects of life. By coming together to build tombs and enclosures groups emphasized this belief and at the same time reduced the possibility of competing claims for the inheritance of resources by individuals.

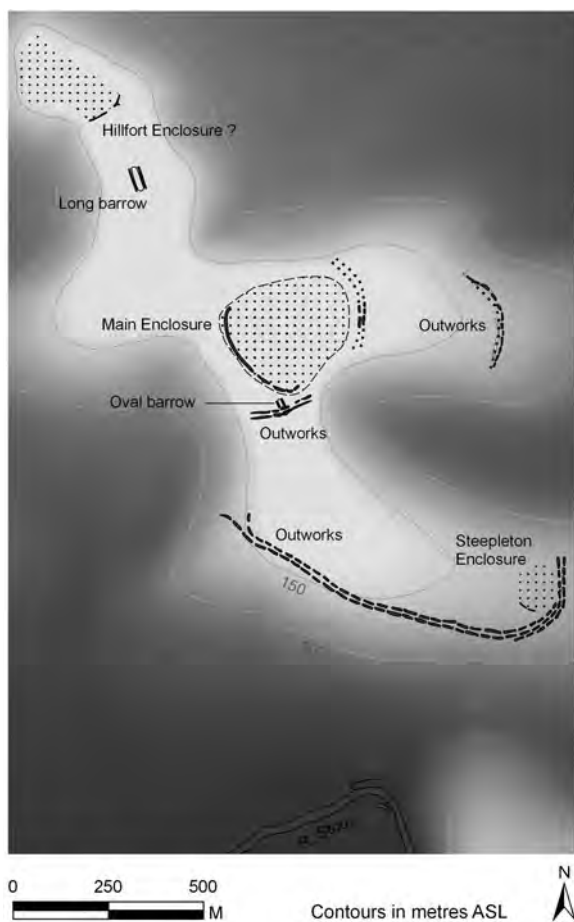
Whatever the role of ritual and ideology in controlling and balancing resources, early farming societies were not as peaceful as might be imagined. Warfare was endemic, especially where population density was high, and travellers would sometimes have encountered blood on the tracks they were following. Bows and arrows were the most common weapon of the period and many thousand leaf-shaped flint arrowheads have been found the length and breadth of the country. People were certainly targets. People killed by arrows are found in long barrows, and defended villages such as Carn Brea, Cornwall, and Crickley Hill, Gloucestershire, were little short of



being strongholds relative to other contemporary settlements. Stone and flint axes, including the prestigious finely made exotic examples, were fearsome weapons too. The evidence of trauma on the bones found in long barrows shows these axes were used in battle, interpersonal combat, or for ritually dispatching people to other worlds. Wooden clubs have been found at Ehenside Tarn, Cumbria, and in the River Thames at Chelsea, Kensington and Chelsea, the latter neatly ornamented with a pommel on the handle and dated to 3630–3350 BC (Beta-117088:  $4660 \pm 50$  BP).

The final hours of occupation at Crickley Hill, Gloucestershire, in around 3450 BC witnessed a victorious attack on the settlement, which was then sacked and burnt. Hundreds of flint leaf-shaped arrowheads littering the ramparts and gateways were found during excavations through the 1970s and early 1980s. At Carn Brea, Cornwall, arrowheads were extremely numerous and clearly formed an important component of the arsenal kept inside the camp.

The development of warfare in early farming society is nowhere more clearly demonstrated than at Hambledon Hill, Dorset, where excavations directed by Roger Mercer between 1974 and 1986 allow a segment of the fourth millennium BC landscape to be reconstructed (48). Around



**Figure 48** Simplified ground plan of the mid fourth millennium BC settlement on Hambledon Hill, Dorset. Later features omitted for clarity. The contour at  $c.130\text{m}$  above sea level indicates the extent of the hill-top. [After Mercer and Healy 2008, fig. 2.1]

3690–3640 BC the main enclosure was built, together with a long barrow to the north, an oval barrow to the south, and an outwork to make any approach from the east both spectacular and defensible. At first this was probably a ceremonial place for periodic meetings that was also used for the excarnation of human corpses while the flesh decomposed before they were buried in the nearby barrows. Within a generation or so, around 3650–3570 BC, the Stepleton Enclosure on the south-eastern spur was added, but it differed from the main enclosure in having a timber-laced rampart and a reinforced gateway. It appears to have been built quickly and with defence in mind. At much the same time a second outwork was added to the northern spur approaching the main enclosure and over the following decades further outworks were added around the hill, separating the main enclosure from the plateau on which it stands, and providing extra protection for the Stepleton Enclosure. Eventually the whole hilltop was bounded on the south-west side by an earthwork more than 1.25km long. Flint mining and grazing took place on the hilltop. Thus, in its final phase, most of the hilltop activity lay within a very large defended enclosure and it was a system that was tested at least three times to judge from burning and casualties in the ditches of the Stepleton Enclosure. One man dated to about 3400 BC was killed by an arrowshot; he was found sprawled in the ditch with what appears to be an infant held in a sling on his front, the remains of both sealed below a collapsed portion of burning rampart. Given that the site was built and used over a period of nearly four centuries such violent episodes were clearly rather rare events, prompted perhaps by the opportunities afforded by gatherings of scattered communities, and it is important to keep the place of warfare in proportion.

Potential threats to society's well-being came from many quarters, including rampant population growth, internal strife, and under-production of food. A balance was maintained, possibly through ritual, ideological pressures and exchange, for seven centuries from the pioneer farming groups around 4000 BC through to about 3300 BC. In the last quarter of the fourth millennium BC, however, major changes took place in some parts of Britain with entrenchment and consolidation in others.

# 5

## RISE UP LIKE THE SUN

### Early chiefdom societies 3200–2000 BC

The later fourth millennium has sometimes been described as a ‘standstill’ in the development of early farming societies, but in some areas it was nothing less than a time of crisis. Changes in the use of enclosures and burial monuments, and also in the types of pottery, flintwork, and material culture, reflect new regional traditions that in some cases had divergent patterns of development. In parts of Britain, notably southern England, these changes were seemingly preceded by tensions between groups and, on occasions perhaps, open warfare.

Two trends that shaped the structure of society during the third millennium can be recognized: first, the decline of monumental collective tombs and the cult of the ancestors; and second, the substitution of community-centred ideologies with more overt signs of social ranking. Among the new beliefs that are visibly part and parcel of these changes is greater concern for celestial movements, particularly the rising and the setting of the sun. This is reflected in the form and layout of monuments, in the decoration seen on pottery, and in the motifs used in rock art.

By contrast, the environment changed very little during the late Atlantic and early Sub-Boreal biostratigraphic divisions (Pollen Zones VII–VIII). The climate remained warmer and drier than today, slightly more continental than in the earlier fourth millennium BC, with short-term oscillations in the degree of wetness. Occasional natural catastrophes can be identified too. Mike Baillie has recognized a widespread reduction in tree-growth at 2911 BC which he tentatively attributes to freak environmental conditions as the earth experienced the effects of a comet passing close by with swarms of cometary debris causing terrifying apparitions in the sky. Later, in 2345 BC, the eruption of Mount Hekla in the south of Iceland put large amounts of volcanic ash into the atmosphere, some of which has been found as tephra in peat bogs that were open at the time, and would have darkened skies in Britain.

Throughout the third millennium BC the coastline generally lay further out than today, although relative sea levels were rising and marine transgressions characterized the late third

millennium BC. The wild fauna remained largely unchanged from earlier times, although aurochs became nearly extinct by the end of the third millennium BC. By contrast, brown bears were common to judge from the number of sites yielding their remains, and among the new species recorded is the red squirrel.

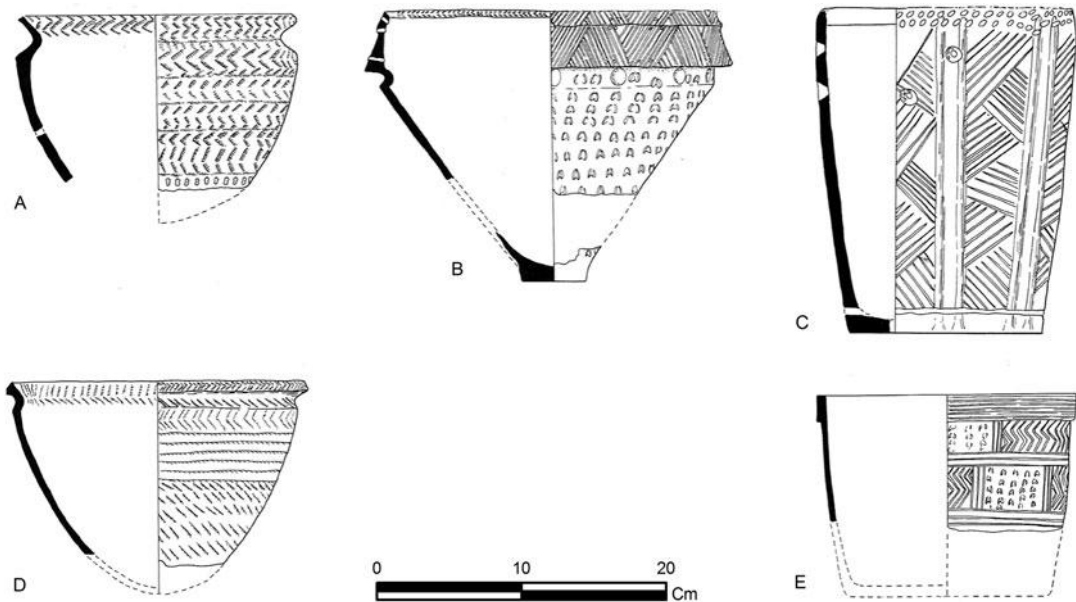
Debate surrounds the pace and rate of woodland clearance and the impact people had on the landscape. In some areas pollen records suggest that previously cleared ground reverted to woodland in the late fourth millennium BC with beech and ash increasing their contribution to the woodland flora. At Hockham Mere, Norfolk, for example, regeneration was well underway by 3635–2941 BC (Q-1045: 4585±120 BP), and at the Abbot's Way in the Somerset Levels previously cleared woodland had closed in by 3097–2764 BC (SRR-531: 4315±55 BP). Regeneration is also evident around Dartmoor, and at Red Moss, Lancashire, reafforestation was complete by about 3338–2880 BC (Q-910: 4370±80 BP). The same applies at Nant Ffrancon, Gwynedd, in north Wales, where recovery of woodland within earlier clearances dated to 3336–2913 BC (Q-906: 442260 BP).

On the chalklands of southern England pasture was widespread by the middle centuries of the fourth millennium BC, but a review by Bob Smith of evidence from around Avebury, Wiltshire, concluded that clearances had become infested with weeds and invasions of bracken and scrub by about 3000 BC. Peat bogs in southern Britain show signs of desiccation early in the third millennium BC, with increasing diminution of the wildwood. The erosion of exposed soils through wind-blow became a real problem in places, as at Broome Heath, Norfolk, where wind-blown sand, probably derived from adjacent cultivated areas, was found beneath an earthwork built shortly after 2910–2497 BC (BM-755: 4167±78 BP).

The causes of these changes are difficult to pinpoint. Alasdair Whittle has suggested that population growth during the later fourth millennium created pressure on the agricultural system to the extent that continued use of fragile soils caused loss of fertility. In due course this led to food shortages and prompted a switch to less intensive farming systems. Discontinuity in the use of enclosures and tombs suggests still more deep-seated problems in political and social organization that may also have been contributory.

## THE TIMES THEY ARE A-CHANGING

Many of the changes visible across Britain in the period 3200 to 2900 BC are associated with the appearance of Impressed Ware pottery, perhaps suggesting renewed influences from traditional contacts in southern Scandinavia. Impressed Wares (49A, B & D) are characterized by heavy decoration created by impressing everyday things into the wall of a pot before it was fired: fingernails, cord, the ends of bird bones, combs, the edges of seashells, knotted cord to create so-called 'maggot impressions', pointed items to create incised lines and grooves, or the tip of a rounded item to produce small pits. Peterborough Wares are the best-known family of British Impressed Wares, subdivided by Isobel Smith into three stages: Ebbsfleet, Mortlake, and



**Figure 49** Impressed Ware and Grooved Ware pottery from sites in Wiltshire. A: Mortlake style bowl from Wilsford; B: Fengate style bowl from the blocking deposits in the West Kennet long barrow; C: Grooved Ware jar from Wilsford; D: Mortlake style bowl from the blocking of the West Kennet long barrow; E: Grooved Ware bowl from Woodhenge. [After Annable and Simpson 1964, 83 and 84]

Fengate. It is now recognized that the first of these emerged as part of the repertoire of mid fourth millennium BC decorated pottery in south-eastern England but that Mortlake and Fengate Ware appeared around 3300 BC in eastern England, in part influenced by indigenous styles (Ebbsfleet etc.) and in part by the later TRB ceramics of northern Germany and Scandinavia. Other Impressed Wares are found in northern England and Scotland, including Meldon Bridge Ware, Unstan Ware, and Hebridean Ware, while on the Isle of Man the distinctive Ronaldsway Ware, characterized by deep rather plain jars, spans the whole third millennium. In Scotland, another style of pottery, Grooved Ware (formerly known as Rinyo-Clacton Ware), appears about 3200 BC, again perhaps with inspiration traceable to northern Europe. Grooved Ware vessels are flat-bottomed and occur in bowl-, jar-, tub-, bucket-, and barrel-shaped forms (49C & E). Decoration includes impressed motifs and designs as well as applied designs created by affixing strips of clay prior to firing. Both families of pottery – Impressed Ware and Grooved Ware – were current through the early third millennium BC perhaps indicating competing ideologies. Peterborough Ware in particular seems to have been associated with those who respected traditional ways, and perhaps an interest in perpetuating them, while users of Grooved Ware promoted new themes and quite different ways of life that by the mid third millennium BC had become dominant across Britain.

## IMPRESSED WARE USERS AND A RENEGOTIATED PAST

Peterborough Ware is often associated with the deliberate blocking-up of long barrows in the late fourth millennium BC. In south-east Wales, for example, the chambers at Gwernvale, Powys, were sealed with rubble packed into the passages about 3335–2893 BC (CAR-114: 4390±70 BP) while early Peterborough Ware vessels were deposited in pits beside the southern chamber (50). Elsewhere in the Cotswold–Severn region tombs at Nympsfield and Notgrove in Gloucestershire, and Ty Isaf, Powys, were deliberately blocked at about the same time, again with Peterborough Ware mixed into the blocking deposits. In Wiltshire, the long barrows at Lugbury and Lanhill were blocked about 3200 BC, while the huge West Kennet long barrow was blocked in stages over a period of perhaps a thousand years starting around 3300 BC. Across north-eastern England long barrows were closed by setting fire to the timber chambers; at East Heslerton, North Yorkshire, the heat from firing the façade was sufficient to fuse the chalk rubble of the surrounding mound. At Trefignath, Isle of Anglesey, Mortlake Ware and Fengate Ware



**Figure 50** Blocking deposits in and around the entrance to the north chamber at the Gwernvale long barrow, Powys. Scale totals 1m. [Photography courtesy of Bill Britnell (Clwyd Powys Archaeological Trust). Copyright reserved]

was found in the blocking of the latest chamber suggesting closure at about 3000 BC. Capel Garmon, Conwy, was probably blocked at about the same time, and Monamore on Arran, North Ayrshire, slightly later at 3083–2474 BC (Q-676: 4190±110 BP).

By contrast, the users of Peterborough Ware embraced other earlier monuments in very traditional ways. Enclosures, for example, show evidence of renewed activity in the ditches, including recuts and the deposition of rubbish best interpreted as the remains of periodic feasting. At Windmill Hill, Wiltshire, source of Isobel Smith's original Peterborough Ware sequence, people were attracted back to the hilltop at intervals through the early third millennium BC with the incidental deposition of material in the part-filled ditches. Sometimes they even built new examples of traditional monuments. A long mortuary enclosure at Raunds, Northamptonshire, was constructed around 3350–2890 BC, while the cursus at Springfield, Essex, was heavily used after 3000 BC with the placement of a Mortlake bowl in the eastern ditch terminal and Peterborough Ware was also associated with the use of a post circle inside the enclosure. Pit clusters retained an interest for users of Peterborough Ware, with the Fengate style being defined with reference to pots recovered in 1910 from a group of pits investigated in a gravel pit at Fengate, Peterborough. As the third millennium advanced, however, pit clusters subtly shifted from the rather random scatters of earlier times to more organized arcs and rings of successively executed cuts into the earth for the receipt of formal deposits. Watery places also continued to hold interest, as shown by the eponymous Mortlake bowl recovered from the River Thames at Mortlake, Richmond-upon-Thames, in 1909.

### ***Settlements and subsistence***

The distribution of settlements occupied by users of Peterborough Ware suggests a shift away from previously well-used parts of the landscape into more marginal or intractable zones. The Cotswolds and the Sussex Downs, for example, seem to have been largely abandoned in favour of adjacent lowlands represented by the Severn Valley and the Sussex coastal plain respectively.

Very few settlements occupied by users of Impressed Wares have been excavated in Britain, and there is no clear pattern to their form, position, or the kind of houses represented. At Little Paxton, Cambridgeshire, a sub-rectangular dwelling 2.7m by 1.8m may belong to this period, and at Cefn Glas, Bridgend, a trapezoidal house 9m by 4.5m was dated to 2840–2490 BC (HAR-744: 4110±70 BP) but has little associated material culture. On the Isle of Man, a partly subterranean house discovered at Ronaldsway during the construction of the airport in 1943 was rectangular in plan, 7.3m by 4.2m with a central hearth, clear evidence for the subdivision of the internal space, a rich material culture dominated by local Ronaldsway Ware, and a series of radiocarbon dates that centre on 2500 BC.

Caves were occupied at this time, among them High Wheeldon near Buxton, Derbyshire; Rowberrow Cavern, Somerset; and Daylight Rock Fissure on Caldy Island, Pembrokeshire. However, how they were used and for what purpose is far from clear.

Little is known of the subsistence strategies of these communities beyond their use of traditional plant and animal species. At Tofts Ness on Sanday, Orkney Islands, and marks of the late fourth millennium BC show that former midden areas were cultivated at this time, and there is also evidence that midden material was scattered on adjacent plots to enhance fertility.

### ***Material culture***

The various regional styles of Impressed Ware are closely associated with a wide range of other kinds of material culture. Stone axes continued to be made at the long-established outcrop sites such as Great Langdale, Cumbria, and Graig Lwyd, Gwynedd, while new sources were brought on stream at Mynydd Rhiw, Gwynedd, Charnwood Forest, Leicestershire, and Whin Sill, Northumberland. Flint continued to be mined in Sussex, and from about 3000 BC the extensive mines at Grimes Graves, Norfolk, began to be opened up.

Flint tools associated with Impressed Wares include scrapers, hollow-scrapers, flaked knives, polished edge knives, single-piece curved sickle blades, leaf-shaped arrowheads, chisel arrowheads, and serrated flakes. Stone items include querns, axes, adzes, chisels, and gouges, and perforated implements known as maceheads start to be made. Antler was also used for the manufacture of maceheads, and whether in stone or bone these objects must be regarded as ceremonial items, perhaps symbols of office or weapons used to dispatch people or animals during rituals.

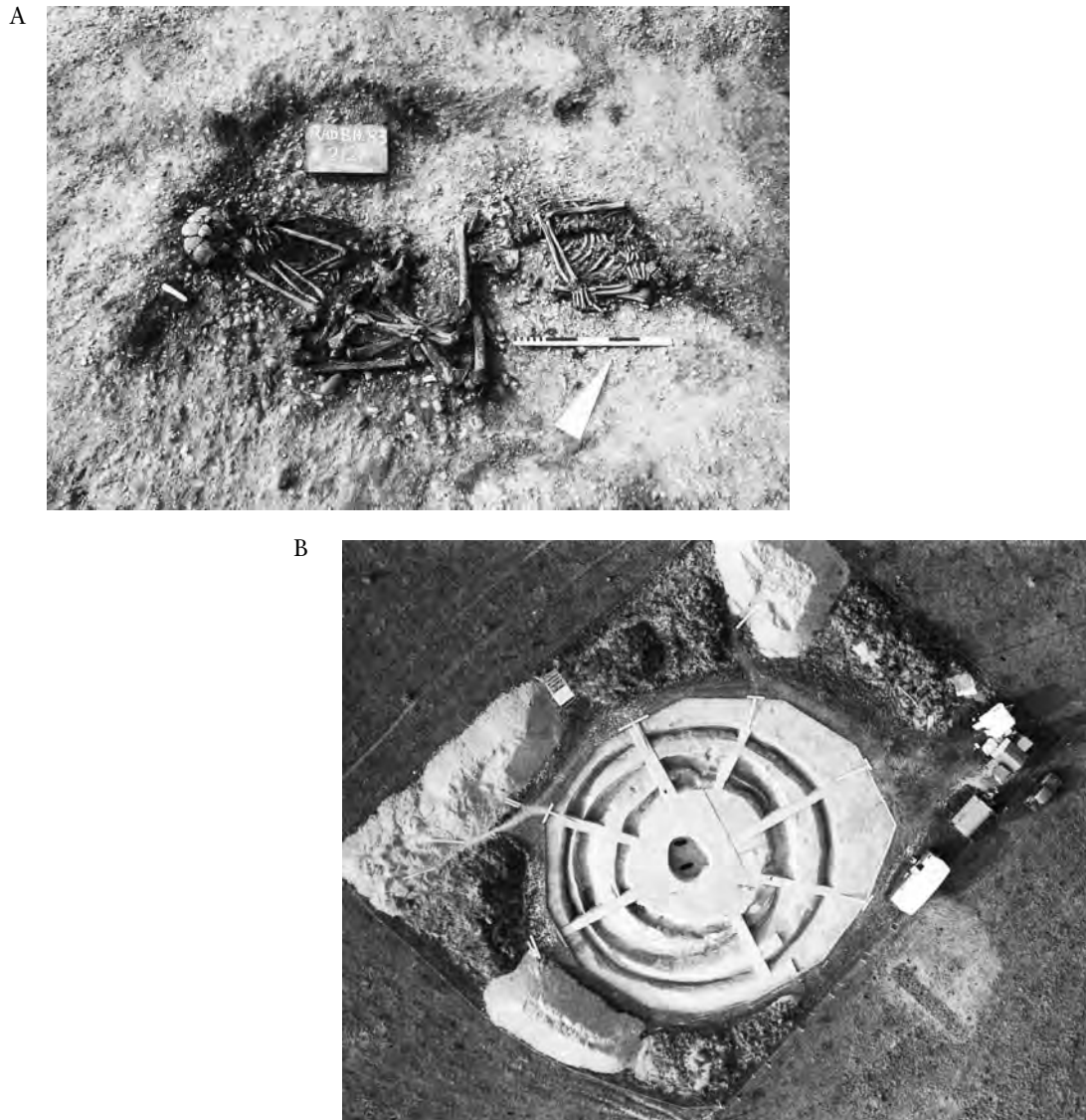
Ornaments include beads and jet belt-sliders made from Whitby Jet or Kimmeridge Shale. Highly polished to create a glossy black effect, belt-sliders presumably secured a leather or woven waistband of some kind.

### ***Burial traditions***

Some burial monuments perpetuated aspects of earlier traditions (51), but in southern Britain at least the users of Peterborough Ware seemingly favoured single or double inhumation burials over multiple communal interments. At Alfriston, East Sussex, an oval barrow about 24m long was built about 3336–2632 BC (HAR-940: 4310±110 BP) over the inhumation of a female aged about 35 to 40 years at death. At Barrow Hills near Abingdon, Oxfordshire, excavations directed by Richard Bradley revealed an oval barrow dating to about 2600 BC covering a grave containing two adults who share a north-east–south-west orientation but with their heads at opposite ends of the grave and their legs intertwined (51A). The male with his head to the north-east was accompanied by a jet belt-slider; the woman with her head to the south-west was buried with a polished flint knife. A large leaf-shaped arrowhead may have tipped a missile that caused the death of the man.

Round barrows were the preferred burial monuments of Peterborough Ware users, although many survive only as ring-ditches because their original mounds have been ploughed away. At





**Figure 51** Late fourth and early third millennium BC burial monuments. A: Two adult inhumation burials found in the central grave of a rectangular barrow at Barrow Hills, Abingdon, Oxfordshire. B: Multi-phase ring-ditch monument at Four Crosses, Powys. The earliest barrow was built about 3100 BC and is represented by the central pit, which contained a single inhumation in the centre and a further inhumation in each of the two smaller oval pits dug into the floor, and an irregular oval ditch which provided material from which a mound was built. The two concentric ditches represent later reuse and enlargement of the site. [Photographs courtesy of (A) Richard Bradley; (B) Chris Musson and Bill Britnell (Clwyd Powys Archaeological Trust). Copyright reserved]



**Figure 51 (Continued) C:** Late fourth and early third millennium BC burial monuments. Duggleby Howe, East Riding of Yorkshire. [Photograph by Timothy Darvill. Copyright reserved]

Stanton Harcourt, Oxfordshire, a grave within a ring-ditch contained the skeleton of a young woman accompanied by a polished flint knife and a jet belt-slider very similar to the example already noted from Abingdon. Similar barrows are known on Cranborne Chase close to close to Wor Barrow, Dorset. In the Welsh Marches at Four Crosses, Powys, a ring-ditch surrounded a round mound (51B) under which was a single grave pit 0.6m deep and dated to 3341–2921 BC (CAR-670: 4440±70 BP). Three separate burials lay on the bottom of this pit, the central one associated with an early Peterborough Ware bowl.

Further north, at Whitegrounds near Burythorpe, North Yorkshire, a pit grave dated to about 3503–2922 BC (HAR-5587: 4520±90 BP) was cut into an earlier monument and contained an adult buried with a fine Seamer-type flint axe and a jet belt-slider. At Duggleby Howe, East Riding of Yorkshire, a round barrow (51C) covered a shaft grave, 2.7m deep, within which was buried an adult male accompanied by a Duggleby-type flint adze, a lozenge-shaped arrowhead, and an antler macehead. Other similar burials include Crosby Garrett, Cumbria, and Grub Low, Staffordshire. In the Peak District at Liff's Low, Derbyshire, the centrally placed adult male inhumation excavated by Thomas Bateman in 1843 was associated with more than a dozen grave goods that include an antler macehead and a small collared flask that is unique in Britain but similar in form to the *kragenflasche* found in the late phases of the Western TRB. Andrew Sherratt has suggested that, on the Continent, such flasks contained narcotic substances such as opium

and cannabis, raising the interesting question as to whether the person buried in Liff's Low might have been a shaman or medicine man.

Some of the simple cist graves without accompanying objects that are known across northern Britain may well belong to this period, and caves were certainly used for burial. At Gop, Flintshire, 14 individuals as well as pottery and a jet belt-slider were buried in a stone construction in the back of the cave. Mortlake Ware was found with burials at Fox Hole Cave, Derbyshire.

From the early third millennium BC onwards burials in all parts of Britain except the very far north show greater evidence of differentiation through association with different types of grave goods. About 75 per cent of burials from recorded contexts of this period are single graves and some individuals are accompanied by a considerable quantity of prestigious items. Duggleby Howe, East Riding of Yorkshire, already referred to, illustrates the point. The inhumation in Phase 2 described above was followed in Phase 3 by nine further interments. The central grave here was an adult male accompanied by no fewer than 33 objects including flint arrowheads, flint flakes, bone pins, boar's-tusk implements, and a beaver's incisor, but the remaining eight graves, which included adults and children, contained no grave goods at all.

## GROOVED WARE ORIGINS AND DEVELOPMENT

Grooved Ware originated in the far north of Britain around 3000 BC and by about 2700 BC had become the dominant pottery across most of the British Isles. In 1971 Ian Longworth defined four sub-styles of Grooved Ware – Clacton, Durrington, Rinyo, and Woodlands – based on the incidence and range of decorative motifs and schemes. However, these have little chronological or spatial pattern, and it remains far from clear what dimensions of the tradition they represent. More cogent in chronological terms are the six Groove Ware horizons proposed by Anna Brindley in 1999 that chart a progression from relatively unstructured patterns, through a preference for structured designs spread across most of the vessel wall, to a minimalist repertoire with decoration confined to the upper parts of a vessel adjacent to the rim. Among the decorative motifs used are spirals, both clockwise and anti-clockwise forms that are often seen as symbolic representations of the sun; lozenges; zig-zags; chevrons; triangles; squares; diagonal lines; cross-hatching; parallel lines; and wavy lines. Similar motifs are found on other kinds of material culture (drums, plaques, balls, etc.) and also rock art dated to the third millennium BC (see below). Whatever Grooved Ware pots were used for, and there were probably many and varied uses, the style of the vessels and the decoration they carried must have provided an extensive symbolic vocabulary communicating a rich set of meanings that their users could have decoded in relation to their views of the world and their place within it. Part of that richness must have been an attachment to a widespread common culture that extends across the whole of the British Isles. For as well as the distinctive pottery there are a host of new kinds of monument that give form and expression to the same ideas albeit on a different scale.

## VILLAGES, FARMSTEADS, AND SUBSISTENCE

The best-preserved occupation sites associated with the users of Grooved Ware lie in the far north of Britain. The first to be discovered was Skara Brae on the west coast of Mainland, Orkney Islands, brought to light around AD 1850 by a massive storm that stripped away overlying sand-dunes. Between 3100 BC and 2500 BC, ten or more houses clustered here, linked together by walled passages. The whole settlement was semi-subterranean, having been built into a vast midden, but the houses are uniform in plan with a square stone hearth at the centre, stone beds either side of the entrance, and a dresser facing the door (52A). Stone boxes in the floor were possibly water containers or tanks in which shellfish were kept fresh. In addition to the exploitation of marine resources, including whales and crustacea, domestic animals were husbanded (mostly sheep and cattle) and cereals were cultivated.

Skara Brae is far from unique. Comparable settlements are known elsewhere on the Orkney Islands at Rinyo, Links of Noltland, Pool on Sandy, and, most recently discovered, Barnhouse only 10km south-eastwards of Skara Brae. Excavations at Barnhouse by Colin Richards between 1986 and 1993 revealed a village of 12 structures of which perhaps 6 were occupied at any one time during the life of the settlement between 3300 BC and 2900 BC. Most of the structures conform to the standard house-plan of the region already described with walls and floors variously made of stone or clay (52B). Doorways mainly opened towards the south or south-east thereby providing a central axis around which the other components were systematically arranged. An exception was a well-built structure, rather large at 12.8m by 10m, set in a prominent location on the west side of the village. This building had two hearths, six recesses around the walls, and seemed to have been constructed as a ceremonial house for communal activities. The subsistence base of the community included the cultivation of barley and perhaps oats, together with husbanding sheep/goats, cattle, and pigs, and collecting wild plants including hazelnuts, apples, crowberries, and various tubers.

The density of activity in the Orkney Islands during the third millennium BC was extraordinary and is swelled by the discovery in 2003 of a new large settlement at Ness of Brodgar which covers at least 2.5ha. It includes a massive building 10m long by 5m wide with a central cruciform chamber. Constructed with courses of yellow and red stone in the walls that also carry rock art, its structure and design, excavator Nick Card considers, was intended to create a sense of awe among those who saw it: a cathedral of its age.

Further north, the Shetland Islands were also occupied at this time. A long-lived farmstead at Scord of Brouster, Mainland, investigated by Alasdair Whittle in 1977–9 shows how the land was cleared for cultivation around 3369–2927 BC (CAR-249: 4492±75 BP); this was followed by the creation of a single house with associated fields that over the following centuries expanded to include two more houses within an irregular fieldsystem covering 2.5ha and including six interconnected plots each defined by low drystone walls that were used for the cultivation of barley. Plain and decorated pottery similar to Grooved Ware, together with worked quartz, flint, steatite, and around 75 broken stone ard-tips, shows that this was an industrious and

A



B

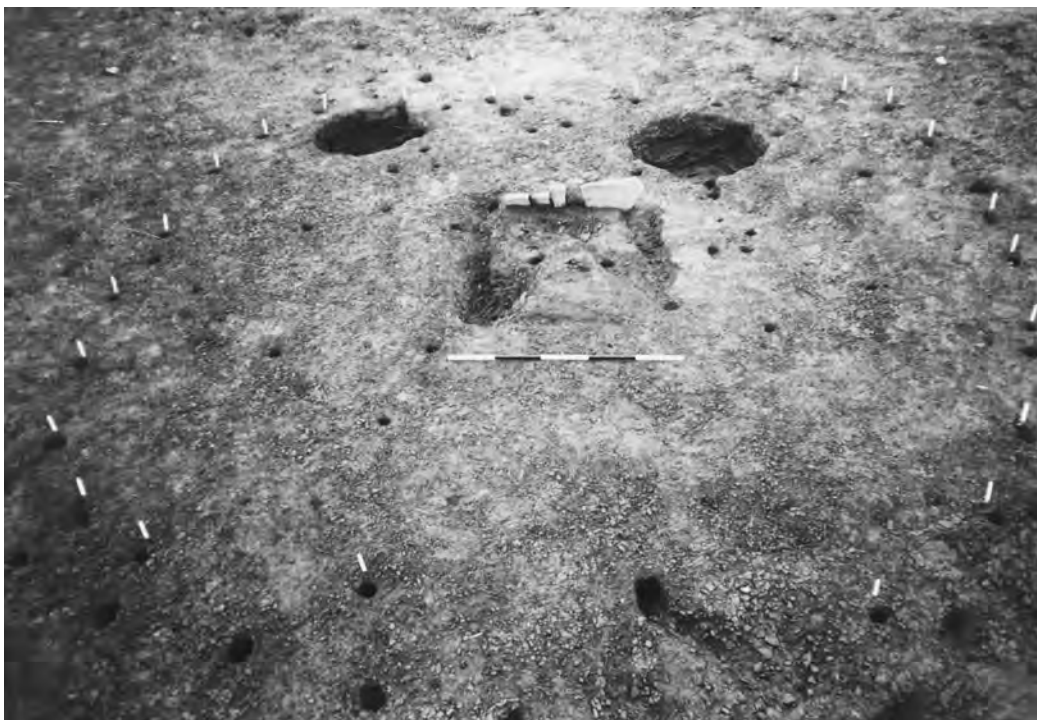


**Figure 52** Mid third millennium BC houses. A: Skara Brae House 7, Orkney Islands, view of the interior showing the stone dresser, seat, central hearth, tanks in the floor (?for keeping shellfish in) and beds. Other houses of the period may have looked like this inside, but with wooden furniture; B: Barnhouse House, Orkney Islands; C: Durrington Walls House 800, Wiltshire; D: Trelystan, Powys. White pegs show the positions of the postholes forming the wall-line of the building; a central hearth and two internal pits can be seen. Scale totals 1m. [Photographs (A and B) Timothy Darvill; (C) courtesy of Mike Parker Pearson (Stonehenge Riverside Project); and (D) courtesy of Bill Britnell (Clwyd Powys Archaeological Trust). Copyright reserved]

C



D



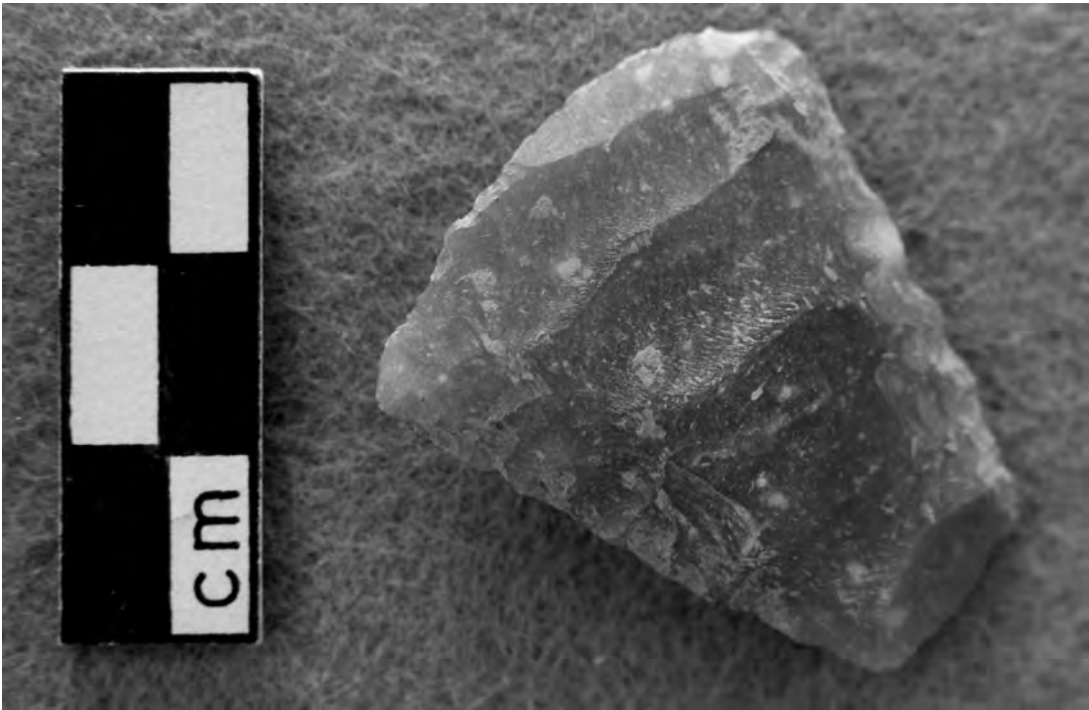
well-connected if small community. Comparable stone-walled houses with a central hearth have also been found at Udal, Western Isles, here closely associated with a shaft containing numerous quartz pebbles and bone points, and capped with a whale vertebrae set so that the caudal hole acted as an orifice allowing access to the shaft below.

In southern Britain, clusters of houses similar to those at Skara Brae but made of wood rather than stone have been found immediately outside Durrington Walls in the Avon Valley, Wiltshire. Excavations here in 2003–7 directed by Mike Parker Pearson revealed six houses, all square in plan with floor areas of between 32m<sup>2</sup> and 7.5m<sup>2</sup> (52C). Dating to around 2500 BC, the walls were marked by lines of stakeholes suggesting a wattle and daub construction. All had a central hearth and chalk plaster floor while internal slots and stakeholes suggest furniture and fittings. Analysis of the finds shows that cooking took place on the south side while flint tools were mainly found in the north-east corner.

Larger houses have been found inside Durrington Walls (see below), including the Northern Circle which was timber-framed, about 15m across, and may have been the equivalent of the communal house at Barnhouse. Four large central posts indicate a high roof while the entrance opens to the south. Lines of stakeholes and occasional posts round about suggest that it stood within a fenced compound. Another similar structure has been found outside Durrington Walls to the south, and elsewhere examples have been excavated at Wyke Down, Dorset; Redgate Hill, Norfolk; and Willington, Derbyshire.

In Wales and the west of England small square houses occur singly or in pairs, and all conform to the same basic model in terms of design and arrangement. Excavated examples include two on high ground at Trelystan, Powys, dated to between 3086–2626 BC (CAR-272: 4260±70 BP) and 2834–2207 BC (CAR-276: 3955±70 BP), that had been preserved beneath later burial monuments (52D). Each house had a central hearth and pits dug into the floor. Analysis of the worked flint and Grooved Ware suggested that it had been introduced to the site from adjoining lowland areas. This, together with the rather flimsy nature of the dwellings and the fact that only wild plants were represented, points to seasonal occupation. Not far away, at Hindwell, Powys, another pair of dwellings was investigated on low ground. The best surviving was a circular structure, 5m across, with a central hearth and an entrance opening to the east, dated to 3020–2620 BC (SWAN-24: 4240±70 BP). The Grooved Ware pottery was all locally produced and lipids extracted from the pottery shows they had adsorbed pork fat from either cooking or storing meat. The local environment was well-wooded so pigs would have been an obvious source of protein.

The importance of livestock can be seen most clearly at Fengate, Peterborough, where excavations revealed the complete plan of a settlement that started about 2839–2210 BC (HAR-399: 3970±70 BP) and developed over a period of 500 years or more. The focus was a scatter of pits, scoops, and hollows clustered around a water-hole. Two rectangular paddocks separated by a driveway, the boundaries defined by shallow ditches and hedge-banks, extended northwards, the gaps in the field corners suggesting to Frances Pryor that these were gateways deliberately constructed to facilitate livestock management. In the north-west corner of the fieldsystem was a



**Figure 53** Large transverse flint arrowhead with ripple-flaking from Billown, Isle of Man. [Photograph by Timothy Darvill. Copyright reserved]

ring-ditch originally defining a small shrine. Beyond the paddocks additional seasonal grazing would have been available on the surrounding fen-edge. Hunting was also undertaken by the inhabitants of this settlement to judge from the bones of aurochs and deer.

Cereal cultivation was widespread during the early third millennium BC and carbonized grain has been recovered from pits on many settlements including Barton Court Farm, Oxfordshire; Mount Farm near Dorchester-on-Thames, Oxfordshire; and Down Farm, Dorset.

Hunting was important too. Pigs were shot by the users of Durrington Walls, Wiltshire, and the aurochs from Fengate, Peterborough, show that these people too enjoyed the thrill of the chase. At Mye Plantation, Dumfries and Galloway, a pit-fall trap some 2.1m deep has been dated to 2560–2240 BC (UB-3882: 3913±39 BP) by alder stakes in the bottom.

## **CRAFTS AND MATERIAL CULTURE**

Distinctive flint and stone tools are associated with Groove Ware. Arrowheads of leaf-shaped and lozenge forms become rare during the third millennium BC, their place taken by



triangular, hollow-based, transverse, and asymmetrically barbed forms. Scrapers become chunkier and are typically made on short thick flakes; together with knives of various forms (discoïd, flat edge-retouched, blunted back, and flake) they dominate domestic assemblages. Other tools include awls, sickles, points, notched flakes, and fabricators. Pressure flaking became widely used to achieve a fine finish (53), and polishing and grinding became more common for finishing knives, arrowheads, and axes. In north-eastern England thin polished knives the size and thickness of a modern credit card show just how skilled some flintworkers really were.

Flint sources generally remained the same because of obvious geological constraints, but Sussex became progressively less important, while East Anglia expanded. Flint mining at Grimes Graves, Norfolk, took off on a grand scale from about 2500 BC. Several hundred mine shafts are known and each could have yielded up to about 8 tonnes of flint (54). Some was shaped into tools on site; the rest was taken away and either worked at nearby settlements or transported to distant communities as raw nodules. That ritual was important to the flint miners is evident from a small shrine comprising a heap of chalk surmounted by a carved figurine of a pregnant woman. In front was a heap of flint blocks and seven antler picks. Since the shaft in which this was found had not yielded much flint it can reasonably be assumed that better fortune was being sought by those who made the shrine. Flint mining in the glacial gravels of north-east Scotland is also represented at this time with the opening of shafts at the Den of Boddam, Aberdeenshire, where investigations by Alan Saville have revealed more than 450 pits.

Across northern and western Britain fine igneous and metamorphic stone continued to be worked for axes, and the range of perforated tools expanded during the later third millennium BC to include a wider range of maceheads in ovoid and pestle forms. Stone balls, some decorated, stone bowls or mortars, various handled and spiked tools, and carved chalk items were also made. A few carved stone plaques are known, all carrying a range of zig-zag, chevron, and cross-hatch motifs similar to those found on pottery and contemporary rock art. Most curious of all is the unique group of three cylindrical chalk drums found at Folkton, North Yorkshire, whose decoration includes a range of spirals and lozenges together with eyebrow and eye motifs suggesting stylized representations of human faces.

Bone and antler was widely worked, not only as antler maceheads but also as a wide range of pins for use as fastenings, awls, scoops, adzes, chisels, beads, pendants, and, in northern Britain, cups and bowls. Antler was also used for making picks, levers, rakes, and digging tools. A clay spindle-whorl from Durrington Walls, Wiltshire, is the earliest secure example of equipment needed to turn fibre (wool, plant materials, etc.) into thread for sewing and weaving. Evidence for woven matting is visible on the bottom of a pot from Rinyo, Orkney Islands, which must have been set on the floor to dry.



**Figure 54** Grimes Graves, Norfolk. Flint mine under excavation in 1971. [Photograph courtesy of Roger Mercer. Copyright reserved]

## **ROUND BARROWS, PIT GRAVES, AND CREMATION CEMETERIES**

An increasing preoccupation with round structures during the third millennium BC finds expression in the way many tradition burial monuments – chambered tombs, long barrows, oval barrows, and portal dolmens – were ignored, while round barrows continued to attract attention, with burials added to existing mounds and new examples built. Cremation generally became more common than inhumation, many burials being found with a bone skewer pin that had presumably been used to fasten a leather or cloth bag containing the ashes. Some round barrows were reused on a spectacular scale. At Duggleby Howe, East Riding of Yorkshire, for example, 53 cremation burials were added to the existing barrow (51C).

### ***Pit graves***

In some areas pit graves of the earlier third millennium BC are fairly common. At Sumborough Airport, Shetland, for example, a cist grave with multiple disarticulated inhumations representing at least ten individuals was dated to 3330–2900 BC (GU-1075: 4395±55 BP). Similarly, at Trelystan, Powys, a pit-burial dated 3327–2875 BC (CAR-282: 4345±65 BP) contained the remains of two individuals, an inhumation and a cremation, originally contained within a wooden coffin or box. A large wooden coffin was also detected in a pit grave at Barrow Hills, Radley, Oxfordshire, which lay in a cut 4.7m by 2.3m and contained the remains of three people—two adult females and an adult male—dated to about 3320–2580 BC (BM-2709: 4270±100 BP). Three simple pit graves of the late fourth millennium BC, each with a single inhumation, lay nearby.

### ***Enclosed cremation cemeteries***

A new kind of burial tradition is the enclosed cremation cemetery, usually represented as a ditched enclosure with an internal bank but no obvious entrance causeway, within which cremations were placed in small pits or hollows. At Garton Slack 112, East Riding of Yorkshire, for example, three hollows each containing a single cremation and a bone skewer pin were found within an enclosure about 12m across. At Dorchester-on-Thames, Oxfordshire, three such enclosed cremation cemeteries have been excavated. Site I was square in plan, 27m across, with 13 pits in the centre, 4 with cremation deposits of which 2 had skewer pins. By contrast, Sites II and XI were circular and up to 30m across. In a sense these monuments represent a formalization of the undelimited deposition of cremations into round barrows or flat ground as at Ballateare on the Isle of Man. But cremation burials were also placed in a bewildering range of other monuments and sacred places: pit circles, pit arcs, pit clusters, and small pits and hollows cut into the earthworks and interior of formative henges and classic henges.

### **PIT CIRCLES**

Not all pits containing Grooved Ware were connected with settlement sites or were used for burials. Some perpetuate the tradition of pit-digging as a means of delving into the earth and leaving deposits for the spirits of the underworld. Occasionally, such pits are rather scattered, but many adopt regular arrangements as arcs or horseshoe settings. Sometimes the pits are separate, occasionally overlapping, but always representing a series of repeat visits to a place over an extended period of time. Broken pottery, flint tools, animal bones (especially red deer antlers), carved stone plaques, and broken stone tools were the most common deposits;

occasionally there is also cremated human bone and it is well recognized that pit circles merge seamlessly into enclosed cremation cemeteries in one direction and small henges in the other (see below). Dorchester-on-Thames, Oxfordshire, illustrates something of the diversity: at Site IX a circle of 14 discrete pits appears to have been dug into an existing low barrow or ring-ditch of which 2 held cremations; nearby, at Site I, 13 discrete pits formed a ring 12m across; Site II included three phases of pit circle starting as a ring of 8 pits and ending with a ring of 12 pits defining an area used for the deposition of 21 cremations; at Site IV 8 pits arranged in a horseshoe open to the south-east later became the setting for the deposition of 25 cremations; and finally, at Site V, 13 intercutting pits arranged in a horseshoe open to the north-west were the scene for 21 cremations. What would have been visible on the ground when these sites were in use beyond some slight hollows and small heaps of unused spoil is hard to say, although some excavated examples include occasional postholes that might have supported wooden markers. Rather different is another new style of monument datable to the second half of the third millennium BC and beyond: the post circle.

## POST CIRCLES

Post circles, or timber circles as they are also known, are archaeologically visible as rings of postholes. A survey of Scottish examples by Kirsty Millican records more than 80 certain and possible examples in northern Britain, and such monuments are increasingly recognized through development-prompted investigations across the country. Four main types are known – single rings, double rings, multiple rings, and oval settings – although the actual ground plans and arrangements of the post-settings suggests that many were more elaborate than their truncated foundations imply. At Machrie Moor, Arran, two timber circles were found just 14m apart. The one to the north-west was a simple ring 13m across with ten fairly regularly set postholes that originally held timbers 0.3m in diameter. The second circle to the south-west comprised two concentric rings, 20m and 14.5m in diameter, with a central setting of five postholes arranged in a horseshoe-shaped setting 5.5m long and 3.5m wide. These central posts were large, about 0.5m in diameter, while the main ring had smaller posts between 0.2m and 0.35m and the outer ring smaller still at about 0.15m diameter. Grooved Ware pottery was present, but very little else. At Sarn-y-Bryn-Caled, Powys, a circle of 20 oak posts, each 0.3m diameter timbers, stood on the circumference of a ring 17.5m across. Two larger posts on the south side may indicate the position of an entrance. In the centre was a setting of six substantial posts in a tight ring 3m across within which as was a burial pit. Originally lined with oak planks, this pit initially containing the cremated remains of a single adult along with four fine flint arrowheads that may have caused the person's death; possibly a ritual sacrifice. Further cremations were later added, among them an adult female. Between the two rings towards the central setting in the south-eastern sector was a pair of D-shaped timbers 2.4m apart at either end of a shallow trench, perhaps an excarnation platform, dated by a series of radiocarbon determinations to about 2100 BC. Alex Gibson

suggested that if the posts had been decorated, perhaps with some kind of superstructure above, the monument would have been rather impressive.

Equally complicated in its original form is the so-called Street House Wossit, Redcar and Cleveland, comprising a segmented ring of 56 wooden posts with an overall diameter of about 8.5m, focused around a central setting of two D-shaped posts about 2m apart and set within a low stone bank. Built around 2200 BC, the site was used for a short while before the posts were dismantled and burnt. Better preserved is the site known as Seahenge at Holm-next-the-Sea, Norfolk – not a henge at all, and not by the sea either when first built – a timber circle comprising 56 half-split oak logs set in a ring 6.8m across with an entrance on the south-west side. The timbers were arranged with their split faces inwards and stood edge to edge, tight together, to form a timber wall. In the centre of the enclosure was the inverted lower trunk and root plate of a mature oak tree that had been extensively trimmed and worked before being dragged to the site using rope made from twisted honeysuckle stems. Dendrochronology allows the construction date to be established as the spring or early summer of 2049 BC.

Nearly a dozen multiple post circles are known. At the Sanctuary near Avebury, Wiltshire, six rings were present with a maximum external diameter of 19.8m. The largest, at Norton Fitzwarren, Somerset, has at least three rings of posts and an external diameter of 54m. Other large sites include Catholme, Staffordshire, with five rings and a diameter of 50m. Similar circles are known within classic henges (e.g. Woodhenge, Wiltshire; Stanton Drew, Somerset; Balfarg, Fife) and henge enclosures (e.g. Durrington Walls, Wiltshire; Mount Pleasant, Dorset). As discussed below, there has been much debate about whether these monumental constructions were ever roofed; the prevailing consensus is that they were free-standing rings with the posts rising in height towards the centre (55A).

## FORMATIVE HENGES AND RELATED ENCLOSURES

The tradition of creating enclosures as meeting places and ceremonial centres has an ancestry stretching back deep in the fourth millennium BC, but it is one that becomes formalized in the third millennium (56). Early examples include C-shaped enclosures such as Broome Heath, Norfolk, built about 2910–2500 BC (BM-755: 4167±78 BP) and enclosing earlier pit clusters whose use may have continued. Another was found during quarrying activity at Wasperton, Warwickshire, dated by association with Ebbsfleet pottery to the late fourth millennium, and something similar is represented by the undated cropmark at Raunds, Northamptonshire, and an earthwork at Bigmerston Firs, Wiltshire. All of these open-sided enclosures are closely associated with long barrows, as too is a fourth example at Longstones to the south-west of Avebury, Wiltshire, where excavations by Josh Pollard revealed a slightly oval enclosure 140m by 110m, open to the east, that had been constructed soon after 2800 BC. Inside at this time there was very little sign of activity, but in later centuries a substantial stone cove was built and it

A



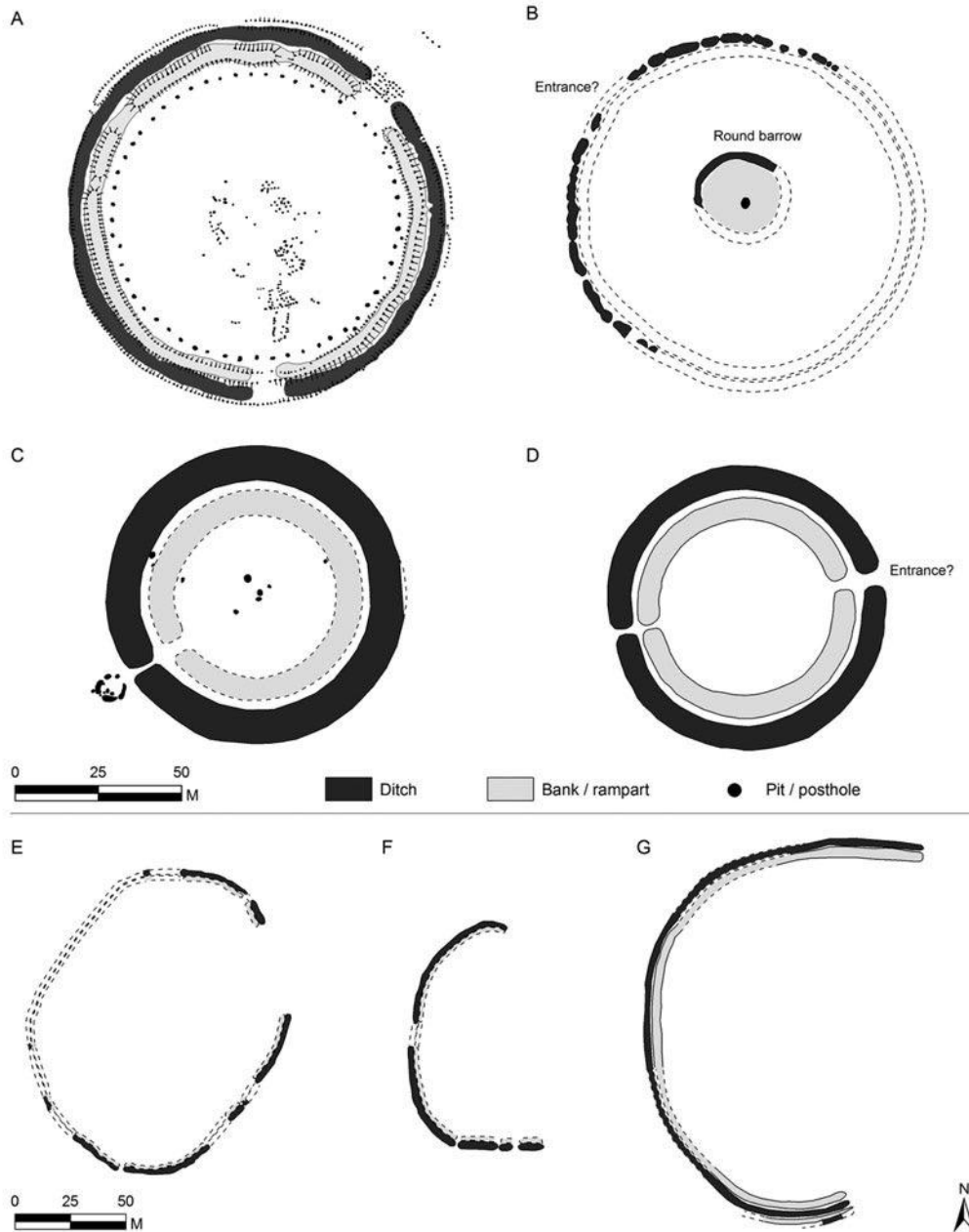
B



C



**Figure 55** Stone and timber circles. A: Time Team reconstruction of a multiple timber circle based on the excavated evidence for the South Circle at Durrington Walls, Wiltshire; B: Callanish, Lewis; C: Merry Maidens, Cornwall. [Photographs by Timothy Darvill. Copyright reserved]



**Figure 56** Ground plans of formative henges and related enclosures in Britain. A: Stonehenge, Wiltshire; B: Flagstones, Dorset; C: Llandegai Henge A, Gwynedd; D: Castell Bryn Gwyn, Isle of Anglesey; E: Longstones, Avebury, Wiltshire; F: Wasperton, Warwickshire; G: Broom Heath, Norfolk. [After Cleal *et al.* 1995, fig. 36; Woodward 1988, fig. 2; Lynch and Musson 2001, Fig.14; Wainwright 1962, figs. 2 and 3; 1972, fig. 2; Gillings *et al.* 2008, fig. 2.30]

became the starting point for one of the two stone-lined avenues leading into the classic henge at Avebury.

The segmented construction of the ditch at Longstones echoes the way that causewayed enclosures were built, supporting Isobel Smith's contention that it was causewayed enclosures that inspired the development of henge monuments. Early henges, what Jan Harding has usefully termed 'formative henges', include the first phase of Stonehenge, Wiltshire. Constructed in 2950 BC, a circular area about 100m across was delimited by a rock-cut ditch 4m wide and 1.6m deep with an internal chalk rubble bank. The main entrance opened to the north-east with minor entrances to the south-east and south. As if to confirm its ancestry the terminals either side of the main entrance include deposits of cattle skulls and jaws that were already more than two centuries old and had presumably been brought from an existing monument as a foundation deposit. Immediately inside the inner toe of the bank at Stonehenge there was, as in many structures of the period, a ring of 56 pits, known as the Aubrey Holes. Some may have held stones, others posts. More than 50 cremation burials have been obtained from twentieth-century excavations at the site, some in the bank, some in the upper ditch fill, and some in the top of the Aubrey Holes as already mentioned. The majority date to the period between 3000 BC and 2500 BC, and studies connected with the Stonehenge Riverside Project suggest that many are male. Assuming the total number of cremations to be about 240, these could represent the accumulated remains of a single dynasty of local rulers, shamans, or medicine men buried over a period of perhaps six or seven centuries. What took place in the central area of the monument at this time is less clear, although stakeholes, postholes, and pits have been found during excavations there and some resolve themselves into fences, screens, and small timber structures. Posts probably stood in the north-eastern entrance, and it is possible that the Heelstone outside the enclosure to the north-east was standing at this time as a marker for the site and its main entrance.

Comparable formative henges have been found at a handful of sites mainly in western Britain (57). Flagstones, Dorset, was discovered during the construction of the Dorchester Bypass in 1986–7. Burials were found in the ditch while, unusually, the sides of the ditch carried panels of rock art. In North Wales, Llandegai A, Gwynedd, was excavated in 1966 in advance of building works and proved to contain ritual deposits of stone axes imported from the Lake District as well as cremation pits inside the enclosure and forming a pit circle immediately outside the south-west entrance.

## CLASSIC HENGES

Classic henges comprise geometrically regular circular ceremonial enclosures usually defined by a bank set outside a fairly substantial ditch (58). They range in size from tiny mini-henges (also called hengi-forms) less than 5m across up to the truly colossal example at Avebury, Wiltshire, with an internal diameter of 350m. There are also variations in the number of



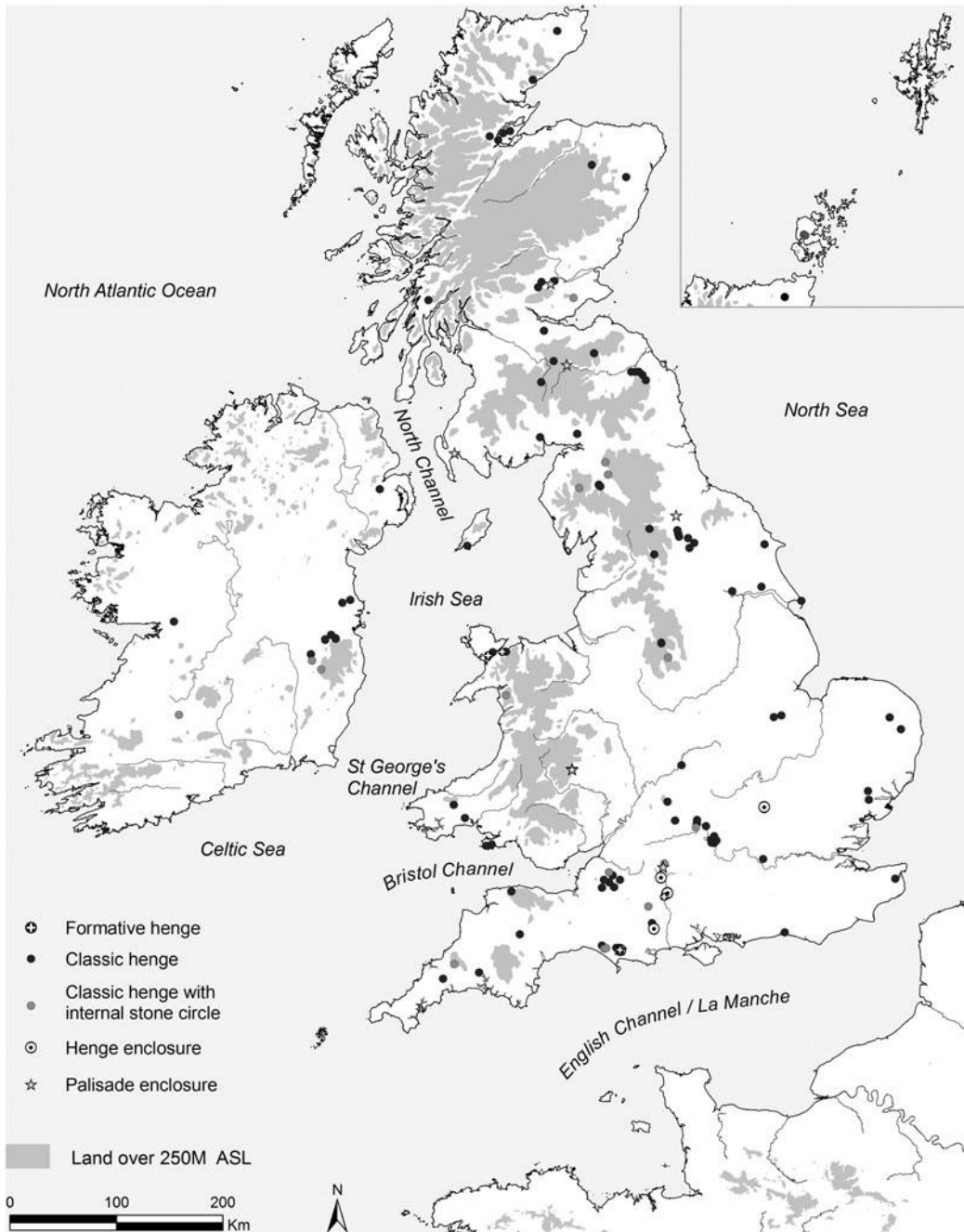


Figure 57 Map showing the distribution of formative henges, classic henges, henge enclosures, and palisaded enclosures. [After Burl 2000, fig. 1; Wainwright and Longworth 1971, fig. 94; Barnatt 1989, fig. 2, with additions]



**Figure 58** A: Classic henges. Avebury, Wiltshire, looking south towards the Silbury Hill. One of Avebury's two avenues can be seen leading from the henge towards the top left. [Photograph courtesy of West Air Photography, Weston-super-Mare. Copyright reserved]

entrances, generally one, two, or four, and in the number of ditch circuits, generally one or two. Most occur singly in a wide range of landscape situations, but pairs are known as at the Ring of Brogar and the Stones of Stenness overlooking the Loch of Harray on the Orkney Islands, three at Thornborough beside the River Ure, North Yorkshire, four at Priddy on the Mendips in Somerset, and five or more along the River Till in the Milfield basin of Northumberland.

Relationships with rivers and lochs seem important. Colin Richards has suggested that in some cases the form of the henge symbolizes the surrounding landscape with the banks representing the horizon and the ditches representing bodies of water in such a way that the monument was a microcosm of the real world – a model of the social universe.

The scale of the banks and ditches is proportional to the overall size of the structure, and there is little evidence that once dug the ditches were regularly cleaned out, although occasional recuts are not unknown. At Maumbury Rings, Dorchester, Dorset, there are deep rock-cut shafts in the bottom of the ditch, in some cases 11m deep. At Thornborough Central, North Yorkshire, gypsum crystals were apparently spread on the surface of the bank to give it a white appearance. The internal space defined by the earthwork is typically fairly flat and the interior visible from the



**Figure 58 (Continued) B:** Classic henges. Ring of Brogar, Orkney Islands, looking north across the Loch of Harray. [Photographs courtesy of Colin Renfrew. Copyright reserved]

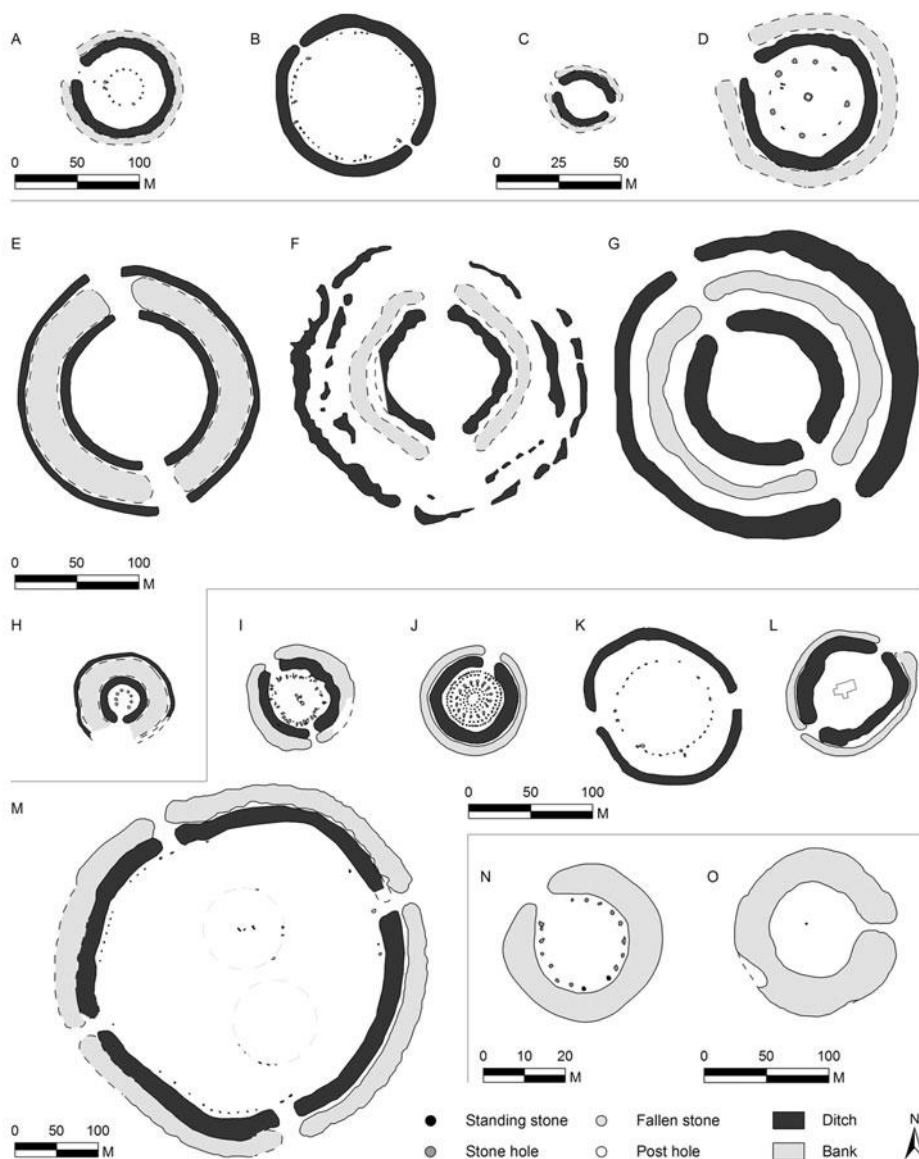
banks although with very limited visibility from the exterior ground surface. Astronomical alignments have been claimed for sight-lines through some henges, or out from the centre, and certainly there is support for this idea at Woodhenge, Wiltshire, whose axis is orientated on the rising midsummer sun to the north-east and the setting midwinter sun to the south-west. Whether such things were recognized as significant by the builders and users of the site is a moot point since many henges display no obvious alignments to the movements of heavenly bodies. Where environmental evidence is available, henges were built in relatively clear landscapes, sometimes on land that had previously been cultivated.

The earliest recorded classic henges appear to be in Scotland – Balfarg Riding School, Fife, for example – dated 3320–2580 BC (GU-1670: 4425±50 BP), but by 2700 BC examples were being built in southern Britain, as at Coneybury, Wiltshire, around 3090–2480 BC (OxA-1408: 4200±110 BP). Various claims have been made for continental inspiration, and the term has been applied to a series of round enclosures of the Lengyl Culture in central Europe. However, these date to the late fifth and fourth millennia BC and are therefore chronologically detached by more than a millennium. Circular enclosures of similar form and date to the British series have been identified along the Aude Valley of south-western France, but these are geographically detached and at present there are no obvious cultural links between the two areas at that time.

Throughout Britain there is a series of classic henges with a standard construction based on the theme of the bank, internal ditch, and one or two entrances. Examples are known from the Stones of Stenness, Orkney Islands, to Maumbury Rings, Dorset, and from Stratford Hills, Suffolk, to Llandegai B, Gwynedd (59, and see 57 for distribution). Overlying this homogeneity is a series of regional variations in design and construction. Around the Irish Sea there are henges with no ditch at Mayburgh, Cumbria, and Meini-Gwyr, Pembrokeshire, which parallel Irish henges. By contrast, in eastern and midland England there are henges with a single bank but double ditch on either side of the bank, sometimes separated from the bank by a wide berm, as at Arminghall, Norfolk, and Big Rings, Dorchester-on-Thames, Oxfordshire.

Classic henges typically contain structures and features, most of which also occur as separate entities outwith henges: cremation burials, cist graves, pit graves, pit circles, post circles (single and multiple), ‘four-poster’ stone settings, standing stones, stone rows, portal stones or portal posts, and stone circles. They suggest that the henge itself is very much the setting for a range of activities requiring various structures as a backdrop. Certainly henges can be seen as performance spaces in which an audience could sit on the bank and look into the interior as rituals and ceremonies that perhaps involved singing, chanting, dancing, and the repetition of oral traditions took place. Avenues at some henges link the monument with a river and in these cases water may have been an important element of the ceremonies.

From another perspective, the strange juxtaposition of bank and ditch may reflect a desire to contain something, whether physical or spiritual, in order to stop it getting into the wider landscape. Relevant here is the suggestion that at some henges the earthworks were actually the last phase of construction, intended to define and contain an already potent place. But such power may not be bad. There is considerable evidence to suggest that henges were focal points in

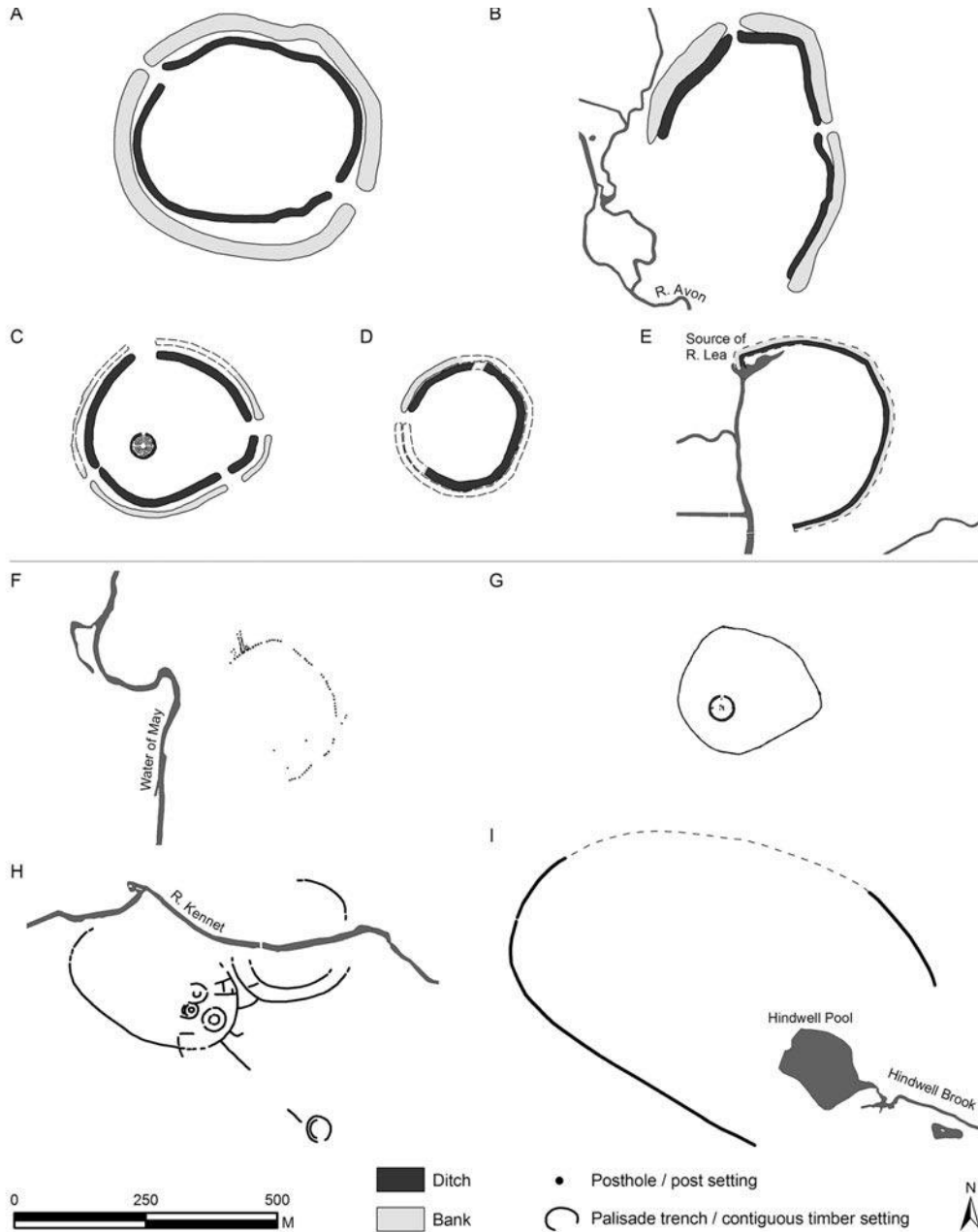


**Figure 59** Ground plans of classic henges of the third millennium BC. A: Balfarg, Perth and Kinross; B: Ring of Brogar, Orkney Islands; C: Yeavering, Northumberland; D: Stones of Stenness, Orkney Islands; E: Big Rings, Dorchester-on-Thames, Oxfordshire; F: Newton Kyme, North Yorkshire; G: Thornborough Centre, North Yorkshire; H: Armingham, Norfolk; I: Arbor Low, Derbyshire; J: Woodhenge, Wiltshire; K: Devil's Quoits, Oxfordshire; L: Knowlton, Dorset; M: Avebury, Wiltshire; N: Meini Gwyr, Pembrokeshire; O: Mayborough, Cumbria. [After Mercer *et al.* 1988, illus. 3; Barclay *et al.* 1995, fig. 7; Darvill and Wainwright 2003, fig. 11; Smith 1965, fig. 68; Harding and Lee 1987, figs. 35, 37, 51, 112, 132, 140, 203, 211, 215, 288, 289]

exchange networks, neutral territory where two or more groups could meet, just as causewayed enclosures had been earlier. At Barford, Warwickshire, several quernstones were found in pits inside and outside the henge, and these could be seen in terms of objects relating to exchange activities, similar perhaps to the evidence from Llandegai, Gwynedd, which led Christopher Houlder to postulate a connection between axe exchange and henges in northern Britain.

## **HENGE ENCLOSURES, PALISADE ENCLOSURES, AND MONUMENTAL MOUNDS**

Four exceptionally large earthwork enclosures, known as henge enclosures because their boundaries comprise banks with internal ditches, are known in central southern England (60A–E, and see 57 for distribution). The best-explored is Durrington Walls, Wiltshire, in the valley of the River Avon to the east of Stonehenge. Excavation by Start Piggott in the 1950s, Geoff Wainwright in the late 1960s, and Mike Parker Pearson and Julian Thomas as part of the Stonehenge Riverside Project in 2003–6 provide a wealth of detail about the site which sits astride a dry valley and covers more than 12ha. The ditch is up to 13m wide and 6m deep; it was probably crossed by four causeways serving the main entrances. The south-eastern entrance is linked to the River Avon by an avenue 30m wide. Estimates suggest that about 900,000 person-hours must have been spent constructing the earthworks, which were probably raised fairly late in the sequence of activity on the site around 2500 BC. About 50,000m<sup>3</sup> of chalk rubble was moved with antler picks, baskets, and ropes to make the boundary earthwork. Immediately inside the south-eastern entrance was a massive multiple timber circle, the Southern Circle, with six concentric rings of posts and an overall diameter of 38m (55A). Much debate surrounds whether the structure was roofed, the currently favoured position being that it was an open-topped structure that after the decay of the posts became the scene of much pit-digging and the systematic and structured deposition of broken Grooved Ware. Small square-shaped houses and larger post-framed houses typical of the mid third millennium BC are certainly represented, the former as the midden and the latter as the Northern Circle excavated by Wainwright. On the higher ground forming the western part of the enclosure are five small penannular enclosures. Two have been sampled by excavation and found to contain square-shaped structures similar to houses but with no associated occupation debris. It is possible that they represent shrines of some kind. Abundant waste deposits within and around the site show a predominance of pig among the animal species; domestic animals that appear to have been hunted in the winter months to judge from the age profile and presence of flint arrow-tips embedded in the bone. Large bucket-shaped Grooved Ware pots are a notable feature of the ceramic assemblage and Merryn Dineley has suggested some were used for brewing meadowsweet ale. Although some people probably lived at the site most of the year there are strong indications that some kind of seasonal festival happened here at the time of the Winter Solstice. It is therefore no great surprise that the south-eastern entrance opens directly towards the point on the horizon where the sun rises at midwinter.



**Figure 60** Ground plans of henge enclosures and palisaded enclosures of the third millennium BC. A: Durrington Walls, Wiltshire; B: Marden, Wiltshire; C: Mount Pleasant, Dorset; D: Knowlton South, Dorset; E: Waulud's Bank, Leagrave, Luton; F: Forteviot, Perth and Kinross; G: Mount Pleasant, Dorset; H: West Kennet, Wiltshire; I: Hindwell, Powys. [After Wainwright 1979, figs. 95 and 96; Gibson 1998, fig. 6.5]

Other henge enclosures include Mount Pleasant, Dorset, beside the River Frome; Knowlton South, Dorset, beside the River Allen; and Marden, Wiltshire, beside the River Avon. Waulud's Bank, Luton, beside the River Lea may also belong to this group of henge enclosures and extend the distribution into the south Midlands.

More widely distributed across Britain than the henge enclosures is a series of palisaded enclosures characterized by massive timber walls bounding spaces of between 3ha and 34ha, often with a pronounced entrance corridor created by turning the boundary walls outwards (60F–I, and see 57 for distribution). More than 20 examples have been found in the last few decades and Alex Gibson has suggested a developmental sequence involving three stages of design and construction. The earliest, starting about 3300 BC, involves walls made with wide-spaced postholes as at Walton, Powys; Meldon Bridge, Scottish Borders; and Forteviot, Perth and Kinross. A second phase starting around 2900 BC is characterized by examples with close-set postholes such as at Hindwell, Radnorshire, and Greyhound Yard, Dorchester, Dorset. The third type dating to after 2700 BC involved posts set in continuous palisade slots as at the two enclosures at West Kennet, Wiltshire, and Mount Pleasant, Dorset.

Something of the scale of these palisaded enclosures may be glimpsed from Meldon Bridge, Peebleshire, where the timber wall was over 500m long and cut off a gravel promontory between two river valleys, enclosing ritual sites, burial areas, and possibly even settlement areas. Far to the south at Mount Pleasant, Dorset, a massive palisade was constructed around 2400 BC within the earlier giant henge enclosure. Enclosing about 4.5ha, the palisade itself was built from massive tree trunks set in a bedding trench about 3m deep. It is hard to imagine that it was anything other than defensive; it was burnt down at some unknown date before being partially dismantled.

Many of the henge enclosures and palisaded enclosures are closely associated with classic henges: Woodhenge is immediately south of Durrington Walls; Mount Pleasant has a classic henge within its boundary; Knowlton South has the Church henge just 300m to the north; Forteviot contains a classic henge, and so on. Large round mounds are also found in close association, in some cases actually built over the edge of the enclosure. At Knowlton South, Dorset, for example, the Great Barrow is 41m across, still stands 6.5m high, and lies less than 500m north of the henge enclosure. At Mount Pleasant, Dorset, the Conquer Barrow, 30m across and 4m high, stands immediately south-west of the palisaded enclosure. And at Dunragit, Dumfries and Galloway, the entrance passage directs attention to the very large Droughduil mound 400m to the south. At West Kennet, Wiltshire, the two palisaded enclosures in the valley of the River Kennet lie only 1250m south-east of the largest prehistoric mound in northern Europe: Silbury Hill (61).

Silbury Hill, Wiltshire, was constructed in several stages, starting about 2400 BC. At first the site was occupied by at least three small mounds, each between 10m and 16m in diameter enclosed, within a circular bank and external ditch rather like a formative henge (see above). The small mounds were progressively encapsulated within an ever-expanding central mound of earth, turf, and chalk rubble that eventually became the great conical hill that dominates today's landscape and which covers 2.2ha and rises 40m above the floor of the Kennet Valley. Its construction must have involved the equivalent of 500 people working every day for ten years. No





**Figure 61** Silbury Hill, Wiltshire. [Photograph by Timothy Darvill. Copyright reserved]

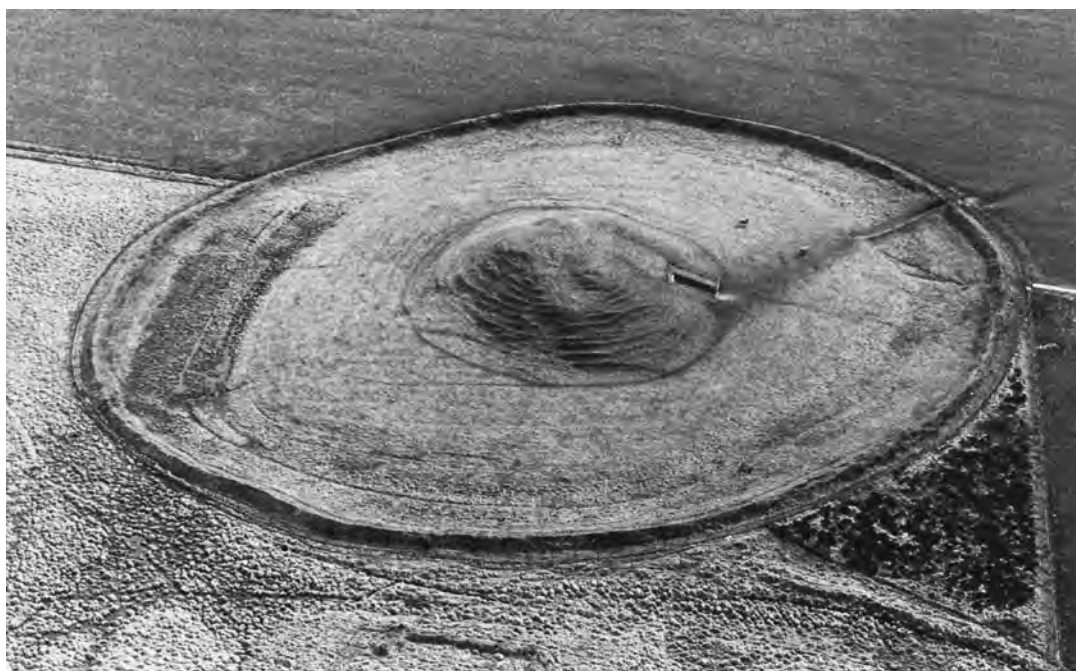
burials or chambers have been found in the mound, although that does not preclude their existence within unexcavated areas. Along the Atlantic seaways of western Britain, however, great round mounds that do cover burial structures are well represented, and like Silbury Hill some overlie earlier ditched enclosures.

### **DEVELOPED PASSAGE GRAVES AND PASSAGE GRAVE ART**

On the Isle of Anglesey and along the coast of north Wales as far as Merseyside a small number of developed passage graves were constructed during the early part of the third millennium BC. Like their simple forebears these sites comprise round mounds covering a central stone burial chamber reached from the outside of the mound via a passage. What makes them distinctive is that the mounds are larger, the passages longer, and the chambers more complex. In constructional terms there are similarities with the developed passage graves of central Ireland, for example New Grange, Dowth, Knowth, and Loughcrew (County Meath), Ireland, and also with similar monuments at Gavrinis and Les Pierres Plates (Morbihan), France, and La Hougue Bie, Jersey. These connections are reinforced by the presence across the same area of passage grave style rock art (see below).

Barclodiad-y-Gawres, Isle of Anglesey, is one of the earliest developed passage graves in Britain with a mound 28m across and a cruciform chamber in which at least six of the stones are decorated. Bryn-celli-Ddu, also on Anglesey, was constructed around 2950 BC over the top of a classic henge that had enclosed a stone oval and a pair of decorated pillar-stones. One of the pillar-stones can still be seen inside the chamber; the other originally lay under the mound but a replica is now visible beside the partially reconstructed mound. The passage at Bryn-celli-Ddu opens to the north-east and at dawn on the Summer Solstice the sun illuminates the quartz-rich stones that form the walls of the chamber. On Merseyside the Calderstones, Liverpool, must have been a similar tomb but it was destroyed many years ago and only the decorated orthostats survive.

In the Orkney Islands about ten tombs of the Maes Howe type represent local variants of developed passage graves (62). The type-site of Maes Howe itself is the finest example, overlooking the Loch of Harray on Mainland. Here, as at other comparable sites, the passage grave was built within an earlier classic henge which in this case had a wall instead of a bank, and a busy interior containing standing stones and paved areas. The mound, which is over 35m in diameter and stands 3.5m high, seals elements of these earlier structures. A large square central chamber with three side chambers incorporates in its construction four tall monoliths that probably stood in the centre of the henge before the passage grave was constructed. Colin Richards has noted various similarities in the design of Maes Howe and the intervisible houses at Barnhouse just 1km



**Figure 62** Maes Howe, Orkney Islands. [Photograph courtesy of Bob Bewley. Copyright reserved]

to the west. But whereas the doorways of the dwellings at Barnhouse opened to the south-east and the rising midwinter sun, at Maes Howe the passage opens to the south-west and the setting sun at the Winter Solstice. For a few brief moments the sun illuminates the chamber: a place of the dead that for most of the year stays dark and cold.

Quanterness, Orkney Islands, is another early developed passage grave with six side chambers, excavated by Colin Renfrew in the mid 1970s. A sequence of radiocarbon dates show it was built and used between 3000 BC and 2500 BC. More than 150 individuals were represented in the chambers explored, including men, women, and children, most of whom appear to have been excarnated and their remains lightly burnt before being placed in the chambers. Grooved Ware pottery as well as several ground flint knives, bone skewer pins, and a small assortment of beads and ornaments were found in the chambers.

Many developed passage graves along the western seaways contain a distinctive kind of rock art in what is known as the passage grave style. As well as motifs drawn from Galician style, this is dominated by circles, U-forms, spirals, radials, parallel lines, offsets, serpentiform lines, zig-zags, lozenges, footprints, and cup-marks (63). Some of these images suggest a strengthening interest in the movements of the sun, and in the case of some stones in Ireland perhaps also the creation of a basic time-reckoning system in the form of a calendar based on lunar months of *c.*29.5 solar days. Jeremy Dronfield has suggested that some of the motifs represent entopic images commonly seen in the mind's eye during states of trance or enhanced awareness brought on by physical extremes, migraines, light-flicker, or hallucinogens.

## **CEREMONIAL CENTRES, CONSPICUOUS CONSUMPTION, AND PEER POLITY INTERACTION**

All these large monuments, the henge enclosures, palisade enclosures, henges, and round mounds, represent displays of power, wealth, and control. The work involved in constructing them was clearly enormous and must have cost their respective local communities dearly in terms of effort and sheer hard graft: Silbury Hill alone may have taken more than 1.5 million work-hours to build and even a modest henge such as the Devil's Quoits, Oxfordshire, at 110m in diameter would have required more than 26,000 work-hours to construct. To this must be added the demands of providing food for the workforce and obtaining some of the raw materials for tools and infrastructure. The environmental impact was considerable too. Over 3.5ha of woodland was felled to provide materials for the South Circle at Durrington Walls alone. Clearly, some authority must have been powerful enough to control such labour and there is more than a whiff that groups were trying to outshine one another through the conspicuous consumption of labour to create ever larger and more elaborate versions of conventional monuments: what Richard Bradley once referred to as 'unnecessary pyramids'.

New social structures developed and the evidence of the burial record suggests the emergence of a stratified society. Ian Hodder has suggested that at times of social stress group affinity may



**Figure 63** Passage grave style rock art of the third millennium BC. A: Key motifs; B: Stone E at Calderstones, Liverpool; C: Stone 6 at Barclodiad-y-Gawres, Isle of Anglesey; D: Pierowall Quarry, Westray, Orkney Islands. [After Piggott 1954, fig. 33; Twohig 1981, fig. 11; Lynch 1991, fig. 14; Forde-Johnston 1957, fig. 29; Sharples 1984, illus. 28]

be symbolized through such devices as the introduction of decoration on pottery or personal ornamentation. This is exactly the type of evidence that appears with the development of Peterborough Ware and the increased use of personal ornaments as grave goods. The new order appears to focus on the individual rather than the community, and the most powerful individuals, according to the evidence of the graves, were probably those who acquired the most wealth in terms of personal objects. These people have the largest barrows and the most elaborate rituals. Whether they were the heads of families or of some larger grouping is unclear, as too is the issue of whether power devolved through fixed descent patterns, or was regularly contested.

Colin Renfrew has characterized societies living in Wessex during the third millennium BC as group-orientated chiefdoms. Personal wealth was accumulated by the head of the group, or chief. This person in turn controlled the redistribution of goods and services, possibly through ritual of some kind. Skills may have been pooled in large communal endeavours, and in this the chief would control the deployment of labour. Within such a society the redistribution of goods, and perhaps also foodstuffs, might be expected to take place at fixed and regular intervals such as feasts or public gatherings. Identifying the extent of individual chiefdoms is not easy, but it is notable that large ceremonial centres comprising clusters of monuments occur at intervals of 40–60km across much of Britain. In southern England Stonehenge and Avebury are probably the two most well-known, but there are many more and some had their origins back in the fourth millennium BC. At Dorchester-on-Thames, Oxfordshire, for example, there is evidence that monuments were reorientated to reflect new interests in solar alignments during the middle centuries of the third millennium BC when henges replaced the old cursus monuments. Moreover, it is notable that almost all of these centres lay close to rivers. At Raunds, Northamptonshire, excavations revealed evidence of a timber riverside structure built between 2870 BC and 2470 BC on the bank of the River Nene, perhaps as a landing stage for those visiting by boat, or a platform from which material was tossed into the water.

At several regional ceremonial centres there is evidence for seasonal gatherings. Durrington Walls, Wiltshire, was the focus of a midwinter festival with occupation around the henge enclosure and along the River Avon in what Mike Parker Pearson refers to as the ‘domain of the living’. From here journeys were made westwards along the cursus or via the River Avon to the formative henge at Stonehenge to commemorate and bury the dead in the ‘domain of the ancestors’; it was a journey that stood as a metaphor for life itself in which to rise up like the sun at dawn was to be born, and to go down like the sun at dusk was to die. Research by Jan Harding around Thornborough, North Yorkshire, suggests that here too people gathered for seasonal festivals beside the River Ure, setting up temporary encampments in the surrounding landscape and trading axes from the Lake District, chert from the Pennines, and flint for the Yorkshire Wolds. And underlying such festivals were deeper and more significant ceremonies in which henges effectively became centres for pilgrimage, places where religious beliefs were reaffirmed, and sanctuaries where the power of recognized deities was concentrated. Harding points out that the modern name of the River Ure derives from the Celtic word *Isura* meaning the ‘holy one’,

perhaps an indication that visitors to the henges were attempting to become spiritually at one with the river's power.

At a more detailed level of analysis local settlement patterns can be identified within a few of these larger territories on the basis of barrow groupings. In the upper Thames Valley, for example, barrow clusters occur every 4km or so, while work by Stephen Green in the Great Ouse Valley suggests that here the interval between clusters was about 10km. To judge from the number of monuments and the distribution of settlement it seems that by 2500 BC the population of Britain was very much higher than a millennium earlier. Average densities may have been in the order of ten persons per 100 square kilometres in the south and east, fewer in the north and west.

The meaning attached to object depositions in graves is uncertain as some may belong to the deceased, some may be family heirlooms, and still others may be funeral gifts from the mourners. However, a general correspondence is assumed between the number and type of objects buried and the wealth or status of the deceased. Many objects found in early third millennium BC graves are relatively simple everyday forms given a better finish during production. Examples include arrowheads, scrapers, bone points, shale beads, antler tines, stone or flint axes, polished-edge knives, serrated blades, stone rubbers, and boar's-tusk blades. But some types were new innovations. Antler maceheads, stone maceheads, jet belt-sliders, and finely made axes served to set some people apart from the rest. Transverse arrowheads, thought to be especially useful for hunting birds, represent another new type often found on ceremonial sites, while bone skewer pins, sometimes with elaborated heads, were initially dress or hair accessories here used to secure bags containing cremated bone.

In addition to the fine objects from graves and ceremonial sites, other unusual items circulated widely. Large stone axes, sometimes over 35cm long and rather cumbersome for ordinary woodworking or forestry, emanated from the Lake District axe factories and from sources in Wales. Large flint axes are also known, and at least ten groups, or hoards, of large axes have come to light, mostly in eastern and southern England. Simple flat copper axes of distinctive Irish form, so-called Lough Ravel types, were circulating by 2500 BC and are known from Moel Arthur, Flintshire, and several other sites across England and Wales. Such axes were certainly used to shape the timbers of Seahenge, Norfolk, and Mike Parker Pearson has argued that woodworking and ditch-cutting at Durrington Walls, Wiltshire, were carried out with copper axes. These axes were the earliest metal objects used in Britain, and Peter Northover has shown that most were made from Irish metal and were therefore imports.

The circulation and use of prestige objects was subject to complicated rules governing access to them, their circulation, and ultimately their disposal. In order to account for these patterns Richard Bradley has postulated the existence of several exchange spheres operating at different levels within society. They range in scale from local networks distributing everyday items like pottery, flint, and quernstones, through to long-distance alliance structures which disseminated valuable goods and knowledge over great distances. The acquisition of goods, and their deliberate placement in graves, may have played a key role in reinforcing and emphasizing prestige both during the life of an individual and in death. It is therefore no surprise that many of the objects

involved were personal items connected with dress (e.g. pins, belt fittings, beads, pendants) since appearance is one of the most frequently used, intimate, and visual ways of displaying and symbolizing power, rank, and status.

The western seaways were important in developing and promoting the large-scale inter-regional contact, especially in northern and western Britain between communities using developed passage graves, that has sometimes been called Peer Polity Interaction. By perpetuating such interests, the inhabitants of these areas kept earlier traditions alive, even though the form of the monuments altered and things were changing all around. By about 2500 BC, however, even these outposts became drawn into the pattern of events taking place elsewhere in Britain to become part of new ritual systems that changed the face of Britain during the later third millennium BC.

## THE AGE OF BEAKERS

By about 2500 BC the tradition of acquiring and disposing of prestige goods was widespread in Britain, and increasing in intensity. The simple goods of the early third millennium, many of which drew their inspiration or were sourced in the north and west of Britain, were becoming widely copied and emulated so that new types had to be sought. For this attention shifted towards Europe, especially the area between the Loire and the Rhine, where a fusion of social traditions and material culture from the Maritime Beaker Complex of Iberia and the Corded Ware Complex of eastern Europe came together as a distinctive new cultural expression exemplified by a range of ceramic vessels known as 'Beakers'. These finely finished red-coloured vessels with carefully executed impressed decoration were generally superior to the Peterborough Ware and Grooved Ware pots already in circulation.

It was once thought that Beaker pottery came to Britain through an invasion of continental people – the Beaker Folk – but later work called this interpretation into question and the idea of invasion as such is now no longer tenable. Indeed, many of the traditions supposedly introduced by these people were in fact indigenous to communities in Britain. Single grave burial, round barrows, and the use of metal objects all pre-date the introduction of Beaker pottery. But people were on the move at this time. Scientific studies of indicator isotopes fixed in people's bones and teeth at different stages in their lives show that some people travelled within Britain and between Britain and the Continent, possibly in larger numbers and with greater regularity than generally admitted. These movements, most likely driven by pilgrimage to regional ceremonial centres, no doubt had much to do with the dispersal of an evolving Beaker Culture that initially involved prestige objects that appealed to a population hungry for new symbols through which to emphasize social inequalities, gender structures, and a sense of power. The exact reason for the widespread popularity of Beakers is unclear, but their shape and size make them suitable for use as drinking vessels and there is some evidence, discussed below, that this was indeed their function.

Many schemes for the classification of Beakers have been proposed, starting with John Thurnam in 1871 whose simple three-stage development represented by (A) Long-necked Beakers, (B) Bell Beakers, and (C) Short-necked Beakers has been reiterated many times since by John Abercromby, Gordon Childe, and Grahame Clark before being reordered as B–C–A by Stuart Piggott. In 1970 David Clarke published a magisterial typological analysis of British Beakers, leading him to suggest a multi-strand evolution based on invasions from the Continent, a proposal dismissed two years later by J N Lanting and J D Van der Waals who instead set out a seven-step model for the development of Beakers in the Netherlands (Bell Beakers to Short-Necked Beakers) elaborated for British Beakers by Colin Burgess. Returning to a simple early (B), middle (C) and late (A) model, Humphrey Case ingeniously suggested a pattern of regional developments within which the three developmental stages could be traced. However, as more radiocarbon dates have become available it is clear that a simple unified evolutionary pattern of Beaker development does not fit the evidence. Instead, Stuart Needham has proposed a more socially grounded approach which identifies three horizons of Beaker use (64).

The first relates to the introduction of Beaker Culture to Britain from the Continent. It is possible that a few Maritime Beakers of Iberian origin reached Britain in the mid third millennium BC, among them vessels from Christchurch, Dorset, and Brean Down, Somerset, with equi-spaced alternating plain and decorated zones. But the first major wave of contact was with Beakers from Needham's *Fusion Zone* in north-eastern France and the Rhineland about 2400 BC. Exactly what processes were involved in bringing these ideas to Britain is far from certain, but

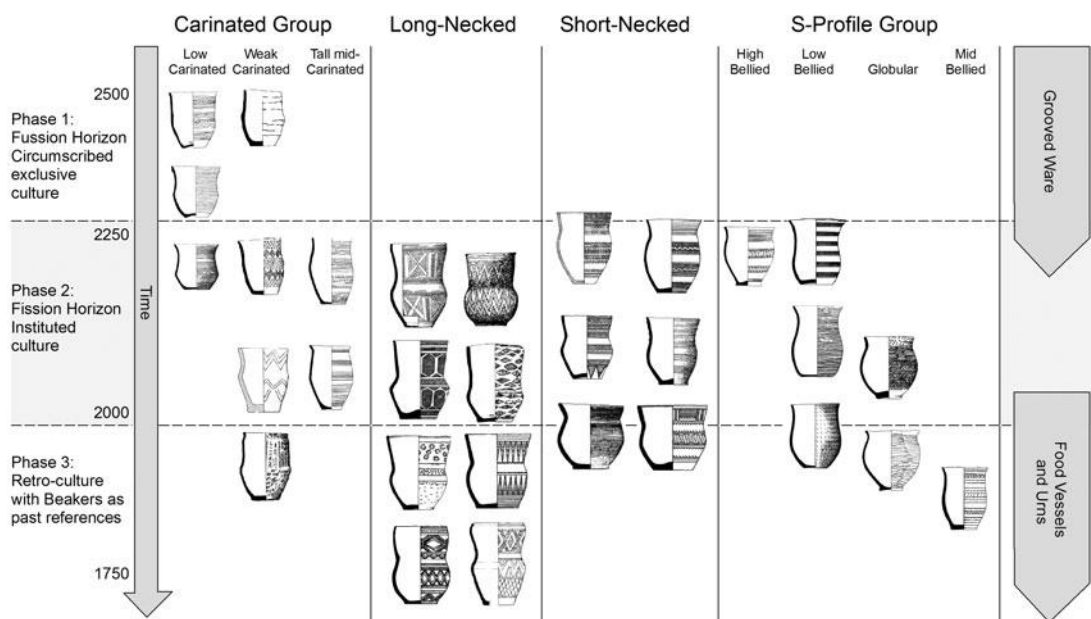


Figure 64 Beaker pottery sequence. [After Needham 2005, figs. 5, 6, 7, 8, 9, 10, and 13]



Marc Vander Linden has suggested that the movement of marriage partners may have been important. It is a view supported by two finds from Scotland that Alison Sheridan interprets as immigrant burials. The first is a grave containing three epi-maritime-style Beakers similar to Dutch examples along with a continental-style hollow-based flint arrowhead dated to 2570–2280 BC found within a ring-ditch at Upper Largie near Kilmartin, Argyll and Bute, in 2005. A second similar burial was found in a continental-style east–west orientated grave at Newmill, Perth and Kinross, together with a Beaker that again compares favourably in form and decoration with vessels known from the Netherlands.

The result of these and other small-scale movements of people was the appearance in Britain of a series of locally made low-carinated (LC) and weak-carinated (WC) vessels. In southern Britain these often had Maritime-Beaker derived (MD) comb-impressed decoration, in the Midlands fingernail-incised (FN) decoration, and in northern England and Scotland All-Over-Cord decoration (AOC) was preferred. Most significantly Beakers in this horizon are associated with metal objects: not the thick chunky copper axes of native design but fine European types including tanged triangular daggers and knives, awls, and pins. Gold was also used for earrings and button caps. Bone belt-rings and stone wristguards complete the set of circumscribed exclusive culture, with burial rites based on north-west European traditions favouring single crouched inhumation. Access to this package was rare, and sites with Beakers of this horizon thinly spread. Early LC forms are found mostly in eastern Britain, eastern Scotland, East Anglia, the upper Thames Valley, and Wessex. Alasdair Whittle has noted that early Beaker burials are not found in the immediate vicinity of henge enclosures and palisade enclosures, are rare at regional ceremonial centres, and are almost absent from major sources of stone and flint such as Grimes Graves, Norfolk. He explains this as resulting from conflict or competition between those innovative groups using Beaker-related material culture to project personal identities and traditional Grooved Ware using groups whose very identity was carved into the landscape as monuments.

Things changed when Beaker Culture really took off in Britain about 2250 BC. What Needham terms the *fission horizon* created an instituted set of cultural values, both material and conceptual, that become the common cultural ethos across the country. Neil Brodie suggests that Beakers were widely adopted to reinforce status and gender divisions and this may have been the driving force. LC Beakers were no longer made, their place being taken by a wide variety of forms including tall mid-carinated vessels (TMC) and weak-carinated vessels (WC), long-necked (LN), short-necked (SN), and a range of high-bellied, low-bellied, and globular S-profile types (SP). The main regional decorative preferences remain, although the boundaries became more permeable as more people moved around. The importance of the Beaker pot itself in burials began to erode since it was no longer associated with the exclusive network that gave access to metal and other prestige items. Bronze replaced copper as the metal of choice, and new kinds of prestige item gained widespread currency: flint daggers and stone battle-axes copying continental prototypes; antler spatulae, stone sponge-fingers for leatherworking; whetstones, cushion-stones and hammer for metalworking; and fire-making kits for travellers. Triangular arrowheads with tangs and sharp barbs, and rectangular stone wristguards to protect archers from the backlash of the

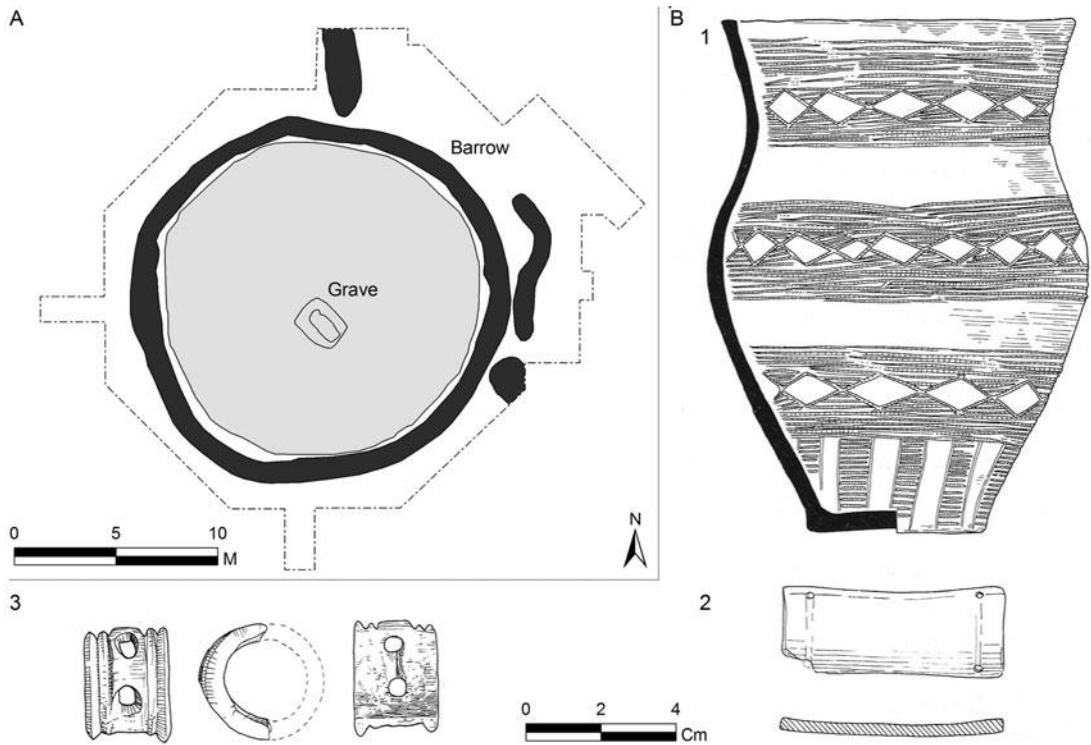
bow string when an arrow was shot, were for warriors or hunters. Shale and jet buttons and bone belt-rings, represent additions to the items associated with dress. Although widespread, variations in the style of Beaker and the range of associated objects may reflect subtle distinctions within society and between sub-cultures.

In the third and final phase, after 1950 BC, Beakers become *passé* and act as past references to former glory days. Graves were generally poor as new fashions spread to fuel desires for prestige objects (see Chapter 6), and Beaker pots become limited in form to late WC, LN, and globular SP types, with the addition of mid-bellied SP forms.

## BEAKER GRAVES AND GRAVE GOODS

Performances and rituals surrounding the funeral and burial of an individual provided important opportunities for the display of wealth, power, and identity, as much for those still living as for the deceased. Early Beaker graves were sometimes lavish, none more so than that of a man dubbed the Amesbury Archer, buried around 2400–2200 BC at Amesbury, Wiltshire, only 6km east of Stonehenge. The man himself, an adult of 35 to 45 years, was born in Alpine Europe and travelled to southern England late in life. In middle age he had suffered an accident that smashed his left knee and gave him a limp and an increasingly withered left leg. He probably died from septicemia resulting from a tooth abscess, and as a visitor to the area may have been a pilgrim seeking spiritual and physical relief at Europe's most famous prehistoric ceremonial centre focused around Stonehenge. At burial his corpse was laid in a flexed position on his left side facing north, a Beaker at his feet, another behind his head, and two more in front of his face. Nearly 100 other items were found in the grave, some of them part of his clothing, some personal possessions, and others perhaps gifts from those present at the funeral. Among them were items confirming that he had travelled widely during life and may have been involved in the emergent trade in metal and metal objects: three copper knives from Iberia, two gold basket earrings, and a cushion stone. Other items such as barbed and tanged arrowheads and two stone wristguards suggest he was skilled at archery. There were also boar's tusks, bone pins, a Kimmeridge shale belt-ring, a cache of struck flint blades, an antler spatula, flint knives, scrapers, and a nodule of iron pyrites from a strike-a-light.

Like the Amesbury Archer, most Beaker burials are inhumations, and in most cases the corpse is laid in a crouched position in the bottom of a rock-cut grave. The remains of wooden coffins are sometimes recorded, as at Hemp Knoll near Avebury, Wiltshire (65), but simple plank biers are more common as at Raunds Barrow 5, Northamptonshire. Flat graves and small cemeteries of up to half a dozen burials are known, one of the largest cemeteries being at Eynsham, Oxfordshire, with 21 recorded graves. Commonly, a grave was marked by a round barrow that comprised a simple bowl-shaped mound following indigenous traditions. A surrounding ditch served as a quarry for turf, soil, and stone to form the mound, while at the same time clearly delimiting the burial place and giving the structure a strong presence in the landscape.



**Figure 65** Beaker grave at Hemp Knoll, Avebury, Wiltshire. A: Plan of the burial within its ditched barrow; B: Grave goods from the primary grave accompanying an adult male aged between 35 and 45 years. 1: Beaker pot, 2: stone wristguard, 3: bone toggle/belt fitting. [After Robertson-Mackay 1980, figs. 2 and 11]

Complicated rituals were sometimes associated with the act of burial. At Shrewton 5K, Wiltshire, the body of an adult male was set in a flexed position on the base of a 2.2m deep shaft grave along with a LN Beaker, a small copper knife, and a deer antler. Before the shaft was filled a small engraving of intersecting lines was made on the side wall. Some time later the top of the shaft was dug out and a second burial inserted: a young adult male with an SP Beaker. Sometimes the original burial was not so fortunate, as at Raunds Barrow 5, Northamptonshire, where the primary burial was disinterred although the grave goods were left behind. Elaborate ceremonies may also be associated with the funeral, well illustrated by Irthlingborough Barrow 1 at Raunds, Northamptonshire, at about 2140–1800 BC. Here a adult male was buried in a typical couched position within a wooden coffin together with a rich selection of grave goods including a LN Beaker, three cattle-rib spatulae, a boar's tusk, five jet buttons (probably from a tunic he was wearing), an amber ring, a slate 'sponge finger', a chalk object, a stone wristguard, a fine flint dagger and triangular arrowhead, two flint knives and two scrapers, a retouched flake, and six fresh flint flakes. The grave was covered in locally sourced limestone flags and a low mound



**Figure 66** Beaker burial at Ashgrove, Fife, seen obliquely during excavation in July 1963. Analysis of pollen from around the Beaker suggests that it contained mead when first deposited. [Photograph courtesy of Kirkcaldy Museums. Copyright reserved]

of soil and stone built up. On the mound was then amassed in excess of 185 cattle skulls that must originally have been stacked three or four deep to form a substantial and rather unusual memorial. Sub-adult and young adult animals were mainly represented, and they had been butchered and skinned. What such a deposit symbolized is far from clear, but one possibility is that it is the remains of a huge funeral feast: 185 animals would have yielded 40 tonnes of meat, 40,000 portions at 1kg each!

Feasting may not have been confined to the mourners; sustenance was sometimes provided for the deceased as well. At Ashgrove, Fife, for example, analysis of residue in a Beaker burial found in cist grave showed that it probably contained mead when first deposited (66). Similarly, studies of the Beaker accompanying a young man buried at Udney, Aberdeenshire, around 2330–2140 BC (OxA-V-2243–47: 3795±28 BP) showed that it too had contained a drink, possibly milk flavoured with meadowsweet and honey in this case.

Artefacts recovered from Beaker graves show some evidence for clearly defined male and female associations (Table F) and the existence of three main ‘sets’ of objects: weapons; personal/dress adornments; and craft tools. Weapon graves are exclusively male. At Dorchester-on-Thames, Oxfordshire, a grave contained a wristguard, two dagger/knives and an SP Beaker, while at Roundway, Wiltshire, there was a large dagger, a wristguard, a barbed and tanged arrowhead, a copper pin, and an SP Beaker with the deceased. Dress fittings and ornaments occur with both males and females. At Devil’s Dyke, West Sussex, shale and copper beads from a necklace accompanied a small WC Beaker in the grave of a ?female, while at Winterbourne Stoke,

Table F. Grave good deposition in Beaker burials by sex.

| Object type                | % of known examples in graves with |               |
|----------------------------|------------------------------------|---------------|
|                            | Male burial                        | Female burial |
| Flint arrowhead            | 100                                |               |
| Tanged copper dagger       | 100                                |               |
| Wristguard                 | 100                                |               |
| Belt ring                  | 100                                |               |
| Gold button cap            | 100                                |               |
| Antler spatula             | 100                                |               |
| Flint dagger               | 100                                |               |
| Bronze dagger              | 100                                |               |
| Stone battle-axe           | 100                                |               |
| Slate polisher             | 100                                |               |
| Flint / stone axe          | 100                                |               |
| Pyrites nodule             | 100                                |               |
| Strike-a-light             | 100                                |               |
| Amber button               | 100                                |               |
| Flint scaper               | 90                                 | 10            |
| Flint flake                | 73                                 | 27            |
| Flint knife                | 82                                 | 18            |
| Jet button                 | 75                                 | 25            |
| Bone awl / pin             | 85                                 | 15            |
| Single rivet bronze dagger | 66                                 | 34            |
| Flint blade                | 50                                 | 50            |
| Earrings (gold / bronze)   | 50                                 | 50            |
| Pebble hammer              | 50                                 | 50            |
| Antler pick / hoe          | 34                                 | 66            |
| Bronze awl                 | 27                                 | 73            |
| Shale / jet bead(s)        |                                    | 100           |

Source: Clarke 1970, Appendix 3.3

Wiltshire, a LN Beaker, two stone whetstones, a flint blade, a jet button, and a jet belt-ring accompanied a burial of unknown sex. Craft tools were placed with both males and females, one of the most celebrated burials being that found below a barrow at West Overton, Wiltshire. Here, an aged adult male was accompanied by a LN Beaker, a bronze awl, two long thin slate strips ('sponge fingers'), an antler spatula, a flint strike-a-light, a nodule of iron ore, and a flint knife. The excavators suggested that this was a leatherworker's grave.

Not all Beaker graves contained grave goods. At the Eynsham cemetery, Oxfordshire, only 10 out of the 21 graves excavated in advance of gravel-working contained grave goods; the remainder were unaccompanied inhumations. The same picture is reflected elsewhere. At Barnack, Peterborough, the central grave contained the body of an adult male accompanied by a fine TMC Beaker, a bronze dagger, an archer's wristguard, and a bone pendant. Round about were no fewer than 15 other graves, some cutting the primary grave, of which only three others contained grave goods. All the graves lay within a ring-ditch about 11.5m in diameter, the spoil from which was used for the construction of a mound as a final ritual act.

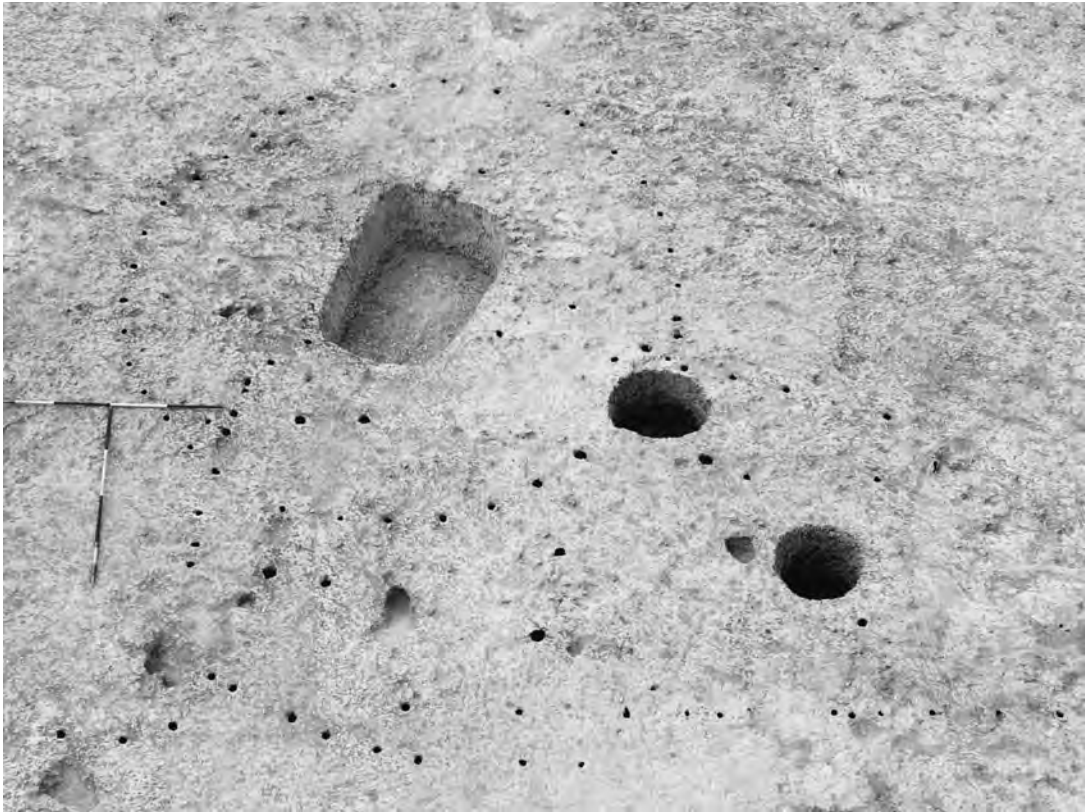
A slight variation on the ring-ditch pattern can be seen at the West Overton, Wiltshire, barrow already referred to. Here, instead of a ditch, a kerb of stones delimited the focal area in which six burials were made including the central grave. Two separate child graves had been dug before the circular bank was built. The burials had clearly been deposited during several episodes of use spread over a considerable time. Other than the central grave, only one of the children had any grave goods. A mound was built over the cemetery, but what dictated when it should be constructed is unclear. Together, the Barnack and West Overton cemeteries illustrate the complexity and diversity of burial deposits. Some graves were given a round barrow of their own, but many barrows cover small cemeteries. In general ring-ditches and barrows are more common in eastern Britain, while ring-cairns either with or without a covering mound are more common in the west.

## BEAKER SETTLEMENTS, HOUSES, AND ECONOMY

Occupation sites recognizably linked to the Beaker Culture mainly belong to the Fission Horizon and afterwards. As well as the familiar decorated fineware already discussed, Beaker occupation sites typically yield quantities of coarse thick-walled pottery which when reconstructed mainly includes large storage jars and cooking pots known by the Dutch term *potbeker*; most are plain but pinched thumb-and-finger decoration is not uncommon.

Beaker settlements are small, mainly single-structure farmsteads, with oval houses that contrast with the square dwellings preferred by Grooved Ware-using groups. Some of the best evidence for settlements comes from the Western Isles. At Northton, Harris, two partly subterranean houses, the better preserved of which was 8.5m by 4.25m, had drystone walls, a hearth towards the south-west end, and indications of internal partitions. To the north, on Lewis, contemporary houses have been found at Barus and Dalmore. Similar structures are also known in southern Britain, but here post-framed buildings with wattle and daub walls predominate as at Newton Mumbles, Swansea; High Lea Farm, Dorset (67); and Easton Down, Wiltshire.

Coastal settlements associated with Beaker pottery are known all around Britain. Especially extensive spreads of pottery, flintwork, and midden-material are known at Newborough Warren, Isle of Anglesey; Merthyr Mawr Warren, Bridgend; Northton on Harris, Western Isles; and Ross Links, Northumberland.



**Figure 67** Beaker house under excavation at High Lea Farm, Hinton Martell, Dorset. The oval house containing two round pits lies centre left, its walls defined by stakeholes, with an intersecting linear fence at the bottom and traces of a circular fence surrounding the grave pit of a later round barrow top right. [Photograph courtesy of John Gale (Bournemouth University and Aerial Cam). Copyright reserved]

Pollen diagrams from across Britain show that after about 2500 BC there is greater evidence of clearance than ever before, and the later third millennium really marks the start of extensive farming in Britain. Andrew Sherratt drew attention to what he termed the *Secondary Products Revolution* when communities across Europe make greater use of animals as sustainable sources of food (milk and blood) and raw materials (wool, hair, etc.), for traction in ploughing, and for moving goods and people to create more diverse, more intensive, and larger-scale subsistence economies. Increasing use of the ard or light plough may be partly responsible for this, and ploughmarks have been recorded at a number of sites including Amesbury, Avebury, and South Street in Wiltshire, and Simondston near Coity, Bridgend. Arable cultivation was clearly widespread, and wheat (*Triticum dicoccum*) and barley (*Hordeum* sp.) have been recorded from numerous pits containing Beaker pottery. Most settlements yield grain-processing equipment. Animals were also

important. In the Midlands and north of England cattle and sheep numbers are surpassed at most sites by the amount of pig bone recovered. Similar frequencies were recorded at North Carnaby Temple, and Low Caythorpe, East Riding of Yorkshire. Further south the picture is not so clear. At Poor's Heath near Risby, Suffolk, a mixed deposit containing Beaker and Food Vessel pottery contained 22 per cent pig, 43 per cent cattle, 26 per cent sheep/goat, and, unusually, 8 per cent horse.

In upland areas of northern and western Britain settlement became more intensive after 2000 BC. Pollen diagrams suggest some clearance, and the spread of burial cairns and ceremonial monuments shows widespread colonization of Dartmoor, central and North Wales, the Pennines, the Lake District, and the North York Moors. Settlement in these areas may not have been permanent, however. The evidence suggests seasonal occupation, possibly within a transhumance pastoralist economy based on the surrounding lowlands and nearby coastal fringes. A number of upland cave sites show traces of periodic occupation, and a few small settlements have been located beneath some later round barrows as at Cefn caer Euni, Gwynedd.

## CRAFTS AND TECHNOLOGY

Studies of objects from late third millennium BC contexts suggest a technological revolution associated with the Beaker Fission Horizon, fuelled in part by the desire for new kinds of item and exotic raw materials. The inspiration for many new designs can often be traced to continental sources while materials came from across north-west Europe. Since items were customarily deposited in graves there was always a demand for new ones.

New sources of stone came into use, including the Cwm Mawr picrite from Corndon Hill on the Welsh borders near Montgomery, Powys, and spotted dolerite from the Preseli Hills of north Pembrokeshire. Pecking and grinding were used extensively during the manufacture of stone tools, and new forms included innovative types of ovoid and cushion macehead, battle-axes, axe-hammers, and shaft-hole adzes. Some of the finest found their way into graves.

Evidence for pottery manufacture is slight but local clays were mostly used. Beaker pots were mostly made by the coil technique and fired in a bonfire-kiln in an oxidizing atmosphere. Decoration was applied with twisted cord or a notched bone comb, an example of which has been found at Gwithian, Cornwall. Boneworking became widespread, and the range of products diverse. Belt-fitting, pins, toggles, and imitation daggers were among the items produced. Although none have been found, clothes were probably largely made of leather, although woven fabrics may have become more common at this time to judge from the scraps of woollen cloth recovered from objects of the period. Basketry was also common. Woodworking was very important and possibly the single most widespread craft, but very little trace has survived.

The single largest growth industry was metalworking. Early metal tools were imports, but native copper-, gold-, and bronze-working traditions soon developed in Wales, the west of England, and northern Scotland. Early metalworking equipment is so scarce that the technology involved is better known through the products than the workshops. However, some idea of how



the technologies developed can be gauged from the skills displayed by the products of each of the identifiable stages in metalworking between about 2700 BC and 1900 BC (see Chapter 6). Copper mining was underway at Cwmystwyth and Natyreira, Ceredigion; Parys Mountain, Isle of Anglesey; and the Great Orme, Conwy, before 2000 BC. Clay crucibles were used for melting metal. Simple one-piece open stone moulds were used for casting axes, dagger blades, and other items in copper or bronze, and these have been found in Wales at Betws-y-Coed, Conwy, in the Welsh Marches at Walleybourne, Shropshire, and in north-east Scotland. Once cast, objects were hammered into shape with stone hammers. Sheet metalworking is evidenced by bronze and gold objects, including earrings, tubular beads, and button covers. Flat stone anvils (cushion-stones) and hammerstones are known from the graves of craftsmen, and as stray finds. Much early metalwork, like flintwork, required other materials to make the complete item. Bone and wooden handles for daggers, wooden handles for axes, and leather sheaths for edged tools would have been common, although largely now lost to us.

Some long-distance travel was undertaken on foot, but there is a strong possibility that by 2000 BC horses had been domesticated if not for riding then at least as pack animals. Horse is native to Britain, but not Ireland, and remains turn up in small quantities at occupation sites from early post-glacial times onwards when they were hunted for their meat. However, during the late third millennium BC horses first appear in Ireland and it is unlikely that they were introduced simply for food. Throughout Europe horse-riding is loosely associated with the appearance of stone battle-axes, which in Britain arrive with the Beaker Culture. Moreover, horse remains start to be placed in significant contexts at this time: a mandible in the mound of Irthlingborough Barrow 3, Northamptonshire, built around 2180–1930 BC, a skull near the centre of Barrow C at Snailwell, Cambridgeshire, and a skull placed in a pit together with an antler pick beside the Etton Cursus, Peterborough. Horse bones were also found among Beaker domestic debris incorporated into a later barrow at Poor's Heath, Suffolk. However, these were not the thoroughbred horses of modern times; rather they were short stocky creatures similar to New Forest ponies.

There is also the possibility that wheels became available in Britain at this time, although none have yet been found. The earliest examples in north-west Europe, dating to about 3000 BC, were simple wooden discs with a central thickened block to act as an axle bearing. In the Drenthe province of the Netherlands more than a dozen examples dating to the period 2600–2500 BC have been found deposited in peat bogs, sometimes in pairs and in one case close to a trackway.

## **COSMOLOGIES AND BELIEFS**

Rivers, springs, and bogs attracted considerable attention during the third millennium BC, perhaps because of connections with a watery underworld. Wooden trackways have been recorded at several sites across Britain, including one at Silvertown, Newham, crossing alder carr on the floodplain of the River Thames dated to 3340–2910 BC (GU-4406: 4410±60 BP), and the Abbot's

Way and Walton Heath crossing the Somerset Levels. Traditionally these are seen as pathways linking settlements or providing access to wetland resource, but the investigation of a 45m long trackway dated to 2900–2500 BC at Hatfield Moor, Doncaster, shows that it simply runs from the shore across to a wooden platform in the middle of the bog and was perhaps for devotional rather than practical use. Similar structures have been found beside what would have been the main channel of the River Nene at Raunds, Northamptonshire (see above), while at Parks of Garden, Stirling, a wooden platform dated to 3340–2920 BC (OxA-8122: 4445±40 BP) extended into fen-carr woodland beside the River Forth.

In quite a different direction, interest in the sun and its movements across the sky was embedded in the beliefs of Groove Ware-using communities to judge from the design of certain monuments, the motifs used in contemporary rock art, and the decoration applied to pottery and other kinds of material culture. After 2500 BC such interests become still more clearly expressed and deeply embedded. Gold sun-discs are one of the earliest kinds of ornament made in metal, and from the perforations and signs of wear were originally attached to garments and displayed like modern-day badges. Their decoration shows close similarities with the racquet-headed pins of the central European Únětice Culture from which they derive, emphasizing the pan-European interest in solar cults that can ultimately be traced back to eastern Mediterranean and Middle Eastern belief systems.

Who exactly the gods of British people were at this time is not known, but they may have been the forerunners of deities known in the north European pantheon of more recent times. Bryony Coles has drawn attention to a series of carved wooden figures from wetland contexts across Britain that might be representations of divine beings. The earliest was found at the Bell Track, Somerset, and dates to between 2700 BC and 2400 BC. It is closely followed by an even more recognizably human form from Dagenham, Barking and Dagenham, dated to 2350–2140 BC (OxA-1721: 3800±70 BP). This second piece is made of pine, has a left eye socket not as deeply carved as the right, and there are signs of ancient damage to the left side of the face. The figure has a pubic hole on the front, but is not clearly male or female. Based on the form of the figure, its attributes, and the wood species selected for its construction, Coles suggests it is a representation of a deity that in Teutonic mythology was known as Odin/Woden, a shaman who sacrificed his left eye to gain wisdom but whose sexuality was ambiguous and who, like all the gods that descended from a race of giants, had a double personality which in other contexts finds expression as the Divine Twins – deities who are joined but separate.

Some of these deities might have been long known to indigenous people in Britain with changes associated with the Beaker Culture more a matter of emphasis than of understanding. After the initial avoidance of the well-established ceremonial centres, Beaker Culture impacts henges and related sacred places through the Fission Horizon to establish structures that continued for several centuries more. In these it is possible to glimpse some of the dimensions at the core of their beliefs. One is the tripartite division of the world into an under-world below the ground, the human-world represented by the ground surface, and the sky-world above. Another is a preoccupation with the circle as a complex metaphor for the sun itself, the cycle of the sun through the

sky and the underworld beneath, the horizon visible to anyone standing on the earth's surface, the cycle of the seasons, and perhaps the passage of human life.

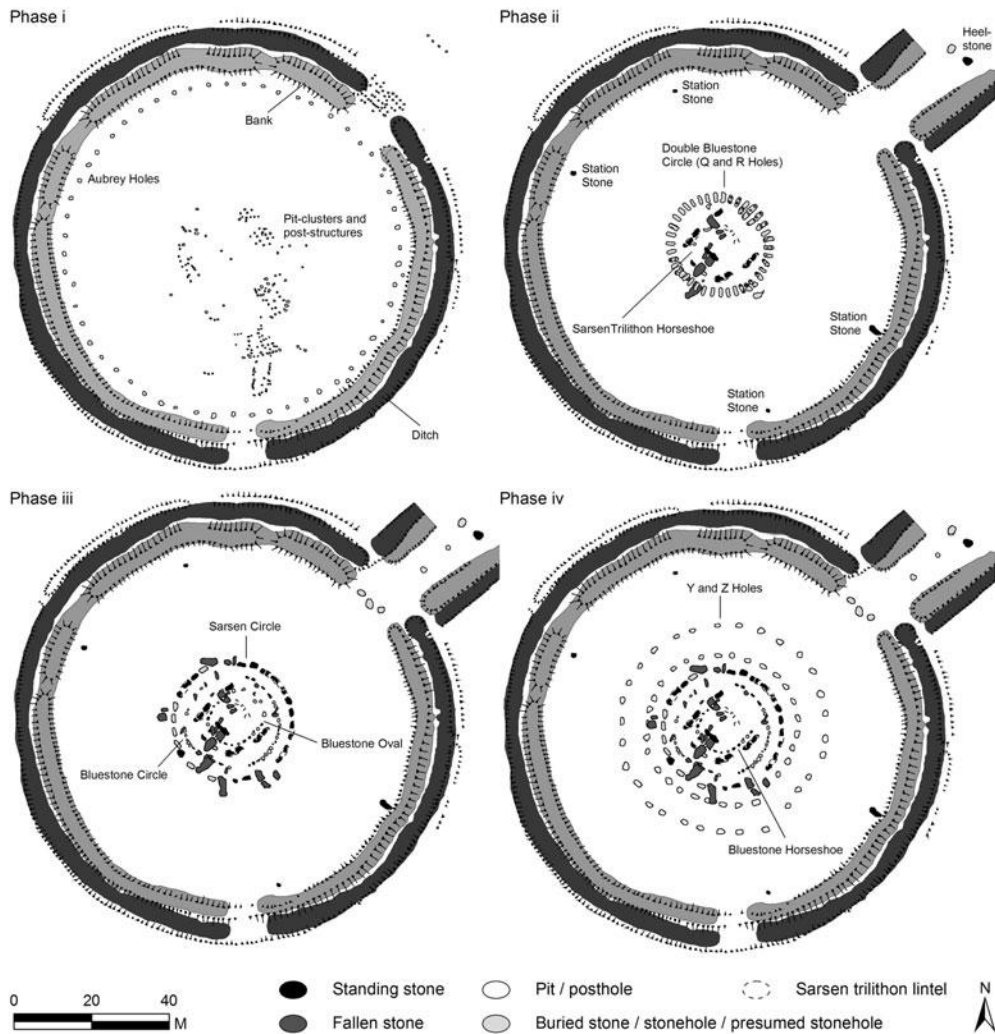
When represented on sun-discs and other designs the circle is often sectorised into four quarters by crossed lines that intersect at about 80 degrees: the same pattern as represented in southern England by the intersection of a north-east to south-west axis marked by the rising midsummer sun and the setting midwinter sun and a south-east to north-west axis reflecting the rising midwinter sun and the setting midsummer sun. These cardinal axes, and the sectors they define, may well have structured visions of time and space building on the cosmological schemes embedded in the structure of monuments and landscapes discussed above.

Both wood and stone were important building materials through the third millennium BC and both probably had symbolic meanings and supernatural powers. Timber circles continued to be built through the late third millennium and beyond, but stone versions were increasingly imposed on existing ceremonial sites as part of Beaker Culture.

## STICKS TO STONES

From about 2300 BC stone structures were added to many existing classic henges, often at great cost in terms of labour and resources in a way that perpetuated the promotion of local identity through the conspicuous consumption of energy to create enviable identities. At Avebury, Wiltshire, for example, a great stone circle of 98 giant sarsen blocks was placed around the inner edge of the henge ditch, two stone circles were built inside the outer one, and central stone settings were added to both: a horseshoe of three uprights to form a cove in the Northern Circle and a single standing stone (the Obelisk) and a short stone row in the Southern Circle. At the Devil's Quoits, Oxfordshire, Arbor Low, Derbyshire, and Ring of Brogar, Orkney Islands, stone circles were added to existing henges. Local sources usually provided the stones, but at Stenness and Brogar in the Orkney Islands slabs of sandstone were transported 12km or more from a quarry at Vestra Fiold on the north-west side of Mainland. By far greatest achievement of such changes though was at Stonehenge, Wiltshire (68).

The formative henge at Stonehenge was built in 2950 BC, and for the following four or five centuries served as an important burial place for a select group of people. Various small-scale structures in timber and occasional marker stones were set up within the site, which at times became quite overgrown. However, around 2300 BC, and clearly associated with Beaker pottery, the site was refurbished. The ditch was redug, the main entrance realigned to provide a clear view of the rising midsummer sun, and an embanked avenue built from the north-east entrance straight to a small stream in Stonehenge Bottom 530m to the north-east and then onwards to the River Avon 2.5km away to the south-east. Inside, a horseshoe-shaped setting or cove was created with five massive sarsen trilithons. Each trilithon comprises a pair of close-set uprights joined at the top by a stone lintel secured in place by mortise and tenon joints of a kind more familiar to carpenters than stonemasons. The axis of the trilithon horseshoe has the open end to the rising midsummer



**Figure 68** Stonehenge, Wiltshire. A: Ground plans of the four main phases in the development of the site. Phase i, c.3000–2500 BC. Phase ii, c.2300–2100 BC, Phase iii, c.2100–1900 BC, Phase iv, c.1900–1700 BC. [Source: Author. Copyright reserved]

sun in the north-east, with the trilithons rising in height towards the south-west where the Great Trilithon straddles the axis to provide a sight-line to the setting midwinter sun. Anyone standing at the centre of the structure could not help being drawn to the scale of the Great Trilithon and at the Winter Solstice could have viewed the setting sun through the gap between the uprights. This of course was the time of year when people traditionally gathered at Durrington Walls, and there may be a correspondence between the five shrines inside the henge enclosure at Durrington



**Figure 68 (Continued) B:** 2008 excavation trench investigating the Phase ii Double Bluestone Circle.  
[Photograph by Timothy Darvill (SPACES Project). Copyright reserved]

Walls and the five trilithons at Stonehenge: could the trilithons represent the five great deities of the day presiding over the ceremonies at the centre of Stonehenge?

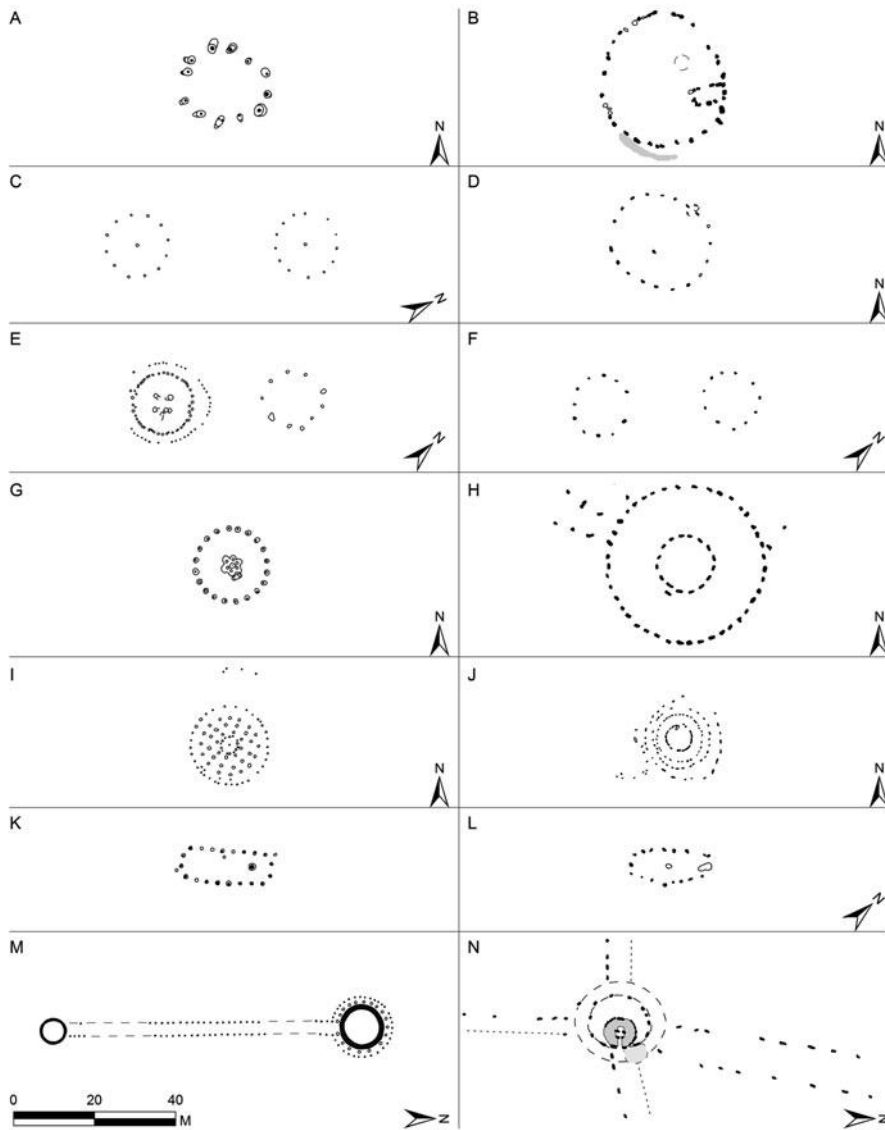
Outside the trilithons was a Double Circle of 80 smaller stones that had been brought to Salisbury Plain from the Preseli Hills of north Pembrokeshire some 250km to the west. Known collectively as the Bluestones they comprise more than half a dozen different kinds of rock – dolerite, spotted dolerite, rhyolite, tuffs – from Carn Menyn and various other outcrops in the vicinity. A sandstone block forming the euphemistically named Altar Stone in the centre of the Trilithon Horseshoe was also brought from south Wales, although its exact source is not yet known.

The Bluestones and the effort expended in their transportation clearly set Stonehenge apart from other sites and are the reasons why the monument became so special in prehistoric times. Why the Bluestones were brought such a distance has caused much speculation and led to the development of two theories. Mike Parker Pearson takes the view that these stones somehow represent the ancestors of people living in the Stonehenge area during the later third millennium BC and were therefore brought as passive reminders of their past. By contrast the present author and colleague Geoff Wainwright see the stones as active components in the lives of these people and point to the presence of healing springs around the source area in the Preseli Hills as well as long-lived oral traditions which attribute healing properties to the stones at Stonehenge. In this theory, transporting the Bluestones to Stonehenge effectively franchised the site as a healing centre, reinvigorated it as a focus for pilgrimage, and perhaps connected the power of the Bluestones with the power of the central deities. It is a scheme that worked. Pilgrims such as the Amesbury Archer are represented in the area, and pieces of Bluestone were chipped off Stonehenge and taken away for use elsewhere more or less from the time the stones were first set up.

Within a century or two the site was remodelled and expanded again with the Bluestones rearranged to form the currently visible pattern: a central Bluestone Oval/Horseshoe within the central Trilithon Horseshoe using spotted dolerite blocks; a Bluestone Circle around the outside of the Trilithon Horseshoe using blocks of various lithological types; and enclosing the central settings a ring of 30 sarsen stones joined at the top by lintels that were again constructed in a manner reflecting carpentry techniques. Curiously, one of the stones (Stone 11) in the south-east sector is narrower and shorter than the others, giving a total of *c.*29.3 uprights. This is the exact number of solar days in a lunar month and perhaps shows that the outer circle was effectively a time-indicating device allowing those looking after the site to timetable ceremonies and be certain about when the gods were in residence.

Timber circles within classic henges built during the middle centuries of the third millennium BC were replaced by stone structures after 2300 BC, and free-standing stone circles in identical designs were built (69). At the Sanctuary, Wiltshire, for example, a double stone circle replaced the earlier multiple timber circle. At Stanton Drew, Somerset, the multiple timber circle 95m across was replaced by a single stone circle 113m across, the second largest in Britain after Avebury. Coves were included in some refurbished henges mirroring those at Avebury and the Trilithons at Stonehenge; good examples include Arbor Low, Derbyshire; Cairnpapple, West Lothian; Stenness, Orkney Islands; and Mount Pleasant Site IV, Dorset.

Timber circles outwith henges were also refurbished. At Machrie Moor on Arran in the Western Isles, both timber circles decayed to the point where the land was cultivated for a period before the multiple timber circle was replaced by a ring of 11 sandstone pillars about 13m across and the nearby single timber circle was replaced by a ring of 10 pillars (9 sandstone and 1 granite) in a ring also roughly 13m across. Beaker pottery was present in the surfaces on which the circles were built, and a radiocarbon date of 2270–1940 BC (GU-2323: 3690±50 BP) immediately pre-dates the construction of the north-eastern circle.



**Figure 69** Ground plans of timber circles, ovals, and avenues (left) and stone circles, ovals, and avenues (right). A: Site 3, Dorchester-on-Thames, Oxfordshire; B: Castlerigg, Cumbria; C: Ferrybridge North and South, Wakefield; D: Boscawen Un, Cornwall; E: Machrie Moor XI Phase 2, Arran, North Ayrshire; F: Machrie Moor XI Phase 4, Arran, North Ayrshire; G: Sarn-y-bryn-caled, Powys; H: The Sanctuary Phase 2 (stone), Wiltshire; I: The Sanctuary Phase 1 (timber), Wiltshire; J: Yellowmead, Devon; K: Littleour, Perth and Kinross; L: Bedd Arthur, Pembrokeshire; M: Down Farm, Dorset; N: Callanish, Lewis, Western Isles. [After Whittle *et al.* 1990, fig. 18; Haggarty 1991, illus. 5 and 13; Cunnington 1931, plate I; Barclay and Maxwell 1998, illus. 42; Darvill and Wainwright 2003, fig. 3; Barnatt 1989, figs. 13, 18, 22, 33; Gibson 1994, figs. 5, 16, and 33]

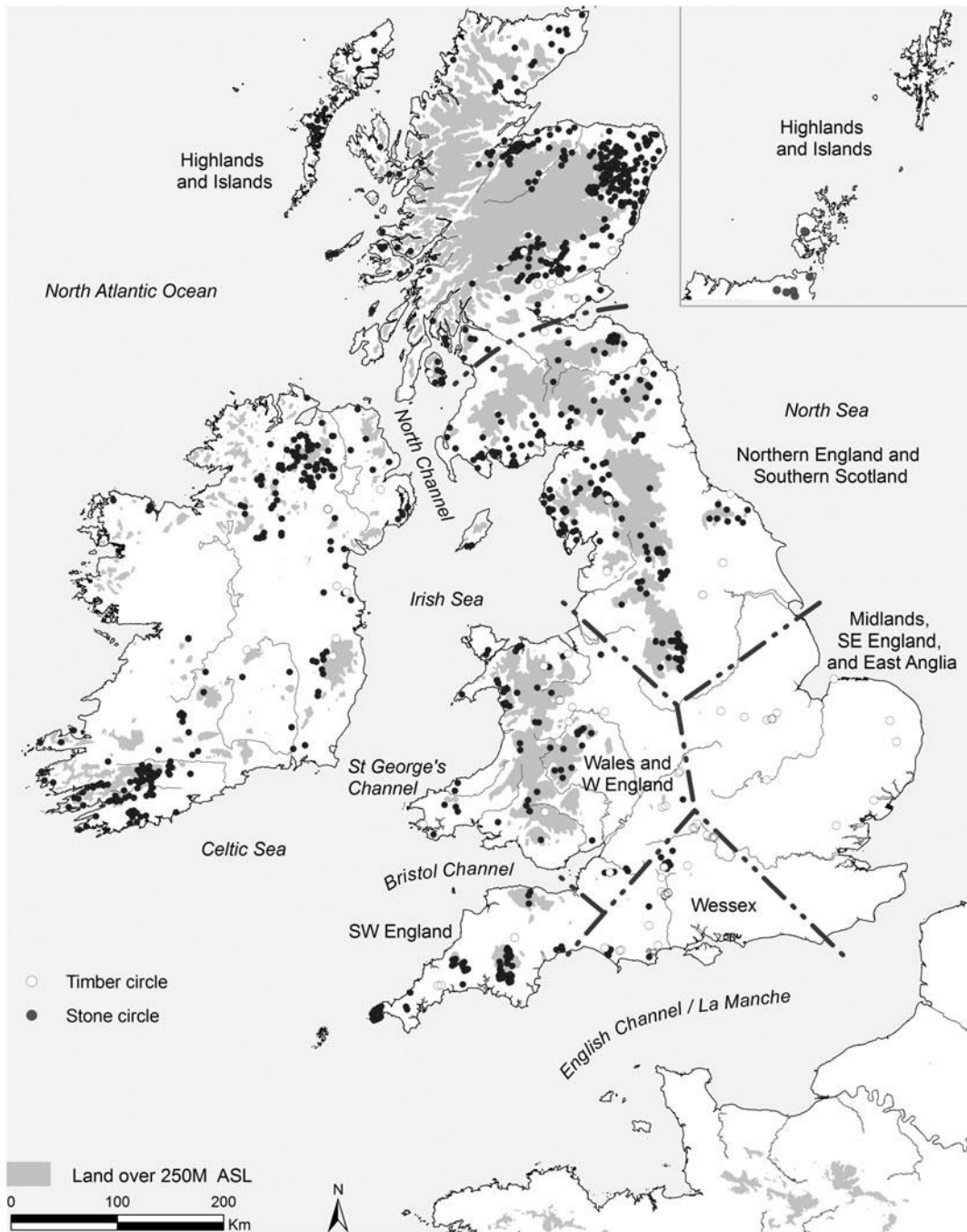


Figure 70 Map showing the distribution of timber and stone circles in the British Isles with broad regional divisions. [After Barnatt 1989, fig. 1; and Millican 2007 with additions]



New stone circles were also built in new locations across the British Isles (70). Aubrey Burl has suggested that the earliest tended to be large more or less true circles with fairly close-set stones and entrances marked by two pairs of stones or taller pillars. Examples include Castlerigg, Cumbria, which has a very clear entrance and rock art on the inner face of pillars on the east side; Swinside, Cumbria; and Long Meg and Her Daughters, also in Cumbria and again featuring motifs from passage grave style rock art on the faces of the outlier known as Long Meg, 18m outside the circle to the south-west. The Rollright Stones, Oxfordshire, and the Merry Maidens, Cornwall (55C), may also be early circles, as also some groups of circles such as the pair at Grey Wethers, Devon, three at Stanton Drew, Somerset, and the line of four at the Hurlers, Cornwall. At Callanish on Lewis, Western Isles, a circle about 12m in diameter with a tall central stone nearly 5m high is linked to the surrounding landscape by an avenue that approaches from the north and three lines of stones radiating out to the east, south, and west (55B & 69N).

Stonehenge was not the only site to embed key astronomical alignments into its very structure, although investigating such matters requires careful consideration as many sites have been modified in recent times to improve their appearance. At Long Meg and Her Daughters, Cumbria, an observer within the circle looking out through the entrance towards Long Meg will see the sun-set at midwinter. Other alignments are more subtle. At Callanish it appears that every 18.6 years the moon dances low over the hills to the south, sets, and then gleams bright within the silhouette of the stone circle as it passes a notch in the horizon. Throughout, the evidence suggests that such regularities fixed into the structure of these sites the simple calendrical mnemonics that regularized the timing of rituals and ceremonies.

## LATE PASSAGE GRAVE REFUGIA

A few parts of Britain do not seem to have embraced Beaker Culture very strongly; rather they continued with highly traditional ways. On the Isle of Man, for example, only one small Beaker settlement and one burial with a Beaker pot is known, yet the local Ronaldsway Culture flourished down to 2000 BC and perhaps a little beyond. Likewise, on the Isles of Scilly and around Land's End, Beakers are scarce. Here the late third millennium BC is characterized by small passage graves variously known as entrance graves or Scilly-Tramore tombs (71A & B). They comprised circular stone cairns with a passage-like chamber opening into the mound and forming a repository for burials. About 50 examples are known in south-west England with occasional outliers in south-eastern Ireland and one on the Isle of Man. Few burials have been recorded from them, but at the fairly intact tomb at Bosiliack, Cornwall (71B), excavations by Charles Thomas in 1984 revealed partial cremations accompanied by a small pot that dated to about 2000 BC.

Around Inverness in eastern Scotland is a small and geographically restricted group of late passage graves known as Clava Cairns. They comprise round mounds with centrally set stone

A



B



C



**Figure 71** Chambered tombs of the late third and early second millennium BC. A: Entrance Grave at Chapel Euny, Brane, Cornwall; B: Entrance Grave at Bosiliack, Cornwall; C: Clava Cairn at Balnuaran of Clava (North-east cairn), Highland, under excavation in 1995. [Photographs (A and B) by Timothy Darvill, and (C) courtesy of Richard Bradley. Copyright reserved]

chambers approached by a passage, although some have a central chamber completely enclosed by the cairn. The entrances usually open to the south-west, and many are set within a stone circle. Excavations by Richard Bradley at Balnuaran of Clava, Highland, in 1994–6 (71C) showed that none of those sampled date earlier than 2300 BC and that their use focuses on the period 2200 BC to 1700 BC. Burials were rare but include both cremations and inhumations, while the layout of the monuments shows an interest in the midwinter sunset on the south-western horizon when the low sun illuminated the central chambers thereby creating a symbolic link between the dead in the chambers and the annual cycle of the seasons. Orthostats of different colours had been selected by the builders, dark red conglomerate and red sandstones being especially common for the walls of the chambers

In western Scotland, the Irish Sea Basin, and through into the Western Isles and Orkney Islands some existing passage graves were used for Beaker burials, while in a few places new passage graves were built as late as 2000 BC. The Bargrennan Group in Dumfries and Galloway, for example, seem to be late constructions and may parallel the situation around Clava. At Callanish, a small passage grave was built inside the existing stone circle.

## FIGHTING WITH GOODS

These small refugia of traditional lifestyles emphasize both the widespread impact of Beaker Culture in Britain and the localized resistance to it. While monument-building was the main method of creating and emphasizing identity, and one that was embraced by the Beaker Culture through their interest in ceremonial sites, there was an increasing trend towards the use of prestige goods as indicators of wealth. Rather than trying to out-do their neighbours at monument-building people began fighting with goods: contesting identity and community with items made or acquired for their prestige value. As items became debased by copying, faking, and reproduction, new types were taken to symbolize power and the old types became acceptable domestic items in everyday circulation. This is most clearly seen in changes to pottery styles. Thus at first Beaker pottery is rarely found outside of burial contexts, whereas two centuries or so later it forms a recognizable domestic assemblage with new styles being chosen as grave goods. In many northern and western areas of Britain these new styles of prestige pottery are known as Food Vessels and their appearance marks the start of the end for Beakers and the beginning of a period when the prestige goods economy ruled.

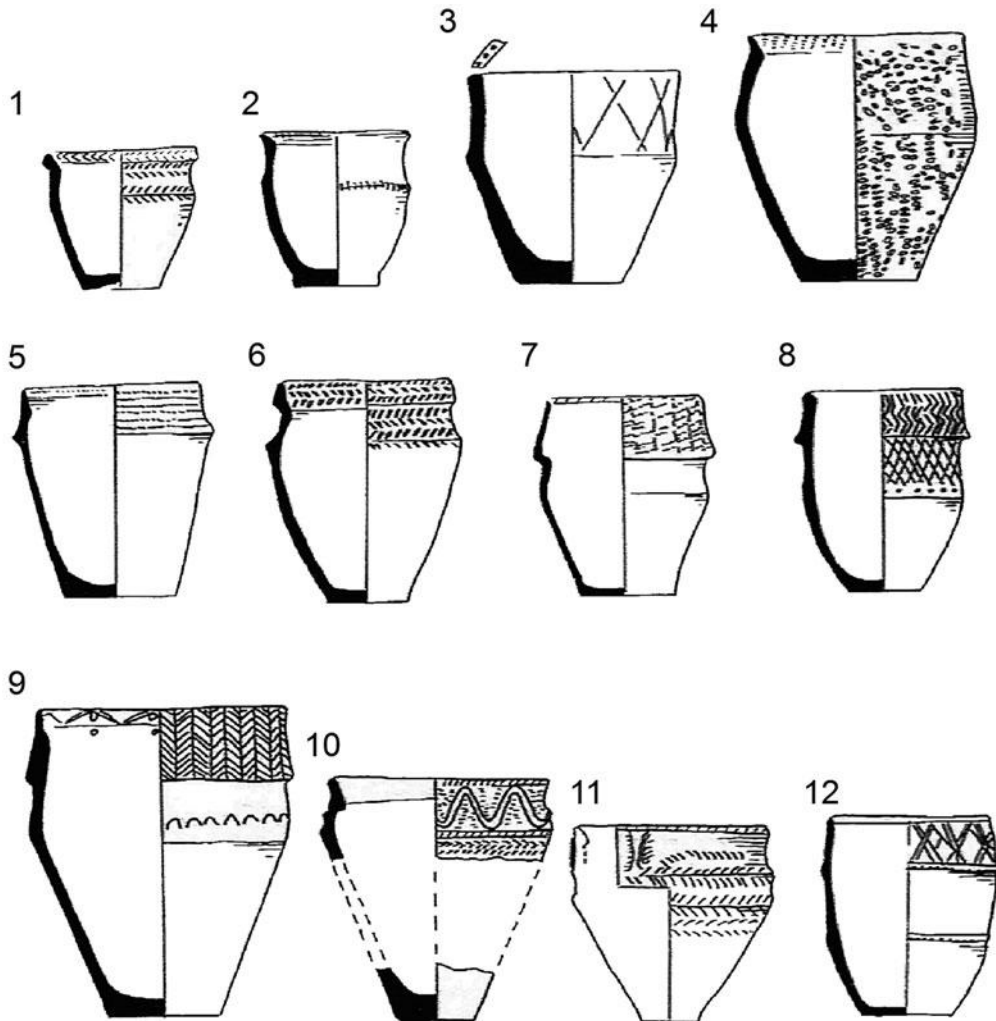
## 6

# DARK SIDE OF THE MOON

## Agrarian societies 2000–800 BC

As the social cachet of Beaker pottery shifted from contemporary to retro, and the preferred forms became increasingly S-profile and globular, new styles of pot came into fashion (72). Food Vessels, Irish Bowls, Encrusted Urns, Collared Urns, and Biconical Urns in turn became the vessels of choice, and like Beakers before them each moved from being rare prestige ware to commonplace everyday ware. The relentless cycle of change was powered by a kaleidoscopic flowing of regional traditions divided and identified by the way each represented its identity, but united by a fascination for recognizing the individual through favoured ornaments and dress in life and death.

Some communities always chose a different line, although as the second millennium BC unfolds these nonconformists become less visible. The late use of passage graves in the extreme south-west of England, along the Atlantic seaways, and in parts of Highland celebrated the sun in ways that were rather different to surrounding communities. Another exception was in north-eastern Scotland where a distinctive type of stone circle developed after about 2000 BC, so-called recumbent stone circles (RSC). More than 150 are known in Aberdeenshire and beyond, all comprising a ring of pillar stones graded in height with the two tallest in the south-west quadrant flanking a prostrate block or recumbent stone. Aubrey Burl has convincingly argued that these circles focused on lunar events and in particular the steady procession of the moon across the top of the recumbent stone making the quartz scattered in front of the recumbent slab glow luminescently. Excavations at Tomnaverie, Aberdeenshire, by Richard Bradley show that contrary to earlier interpretations the circle was built on top of a round cairn originally constructed during Beaker times in the twenty-fifth century BC (73). Similar patterns of change translating an existing cairn into the setting for a recumbent stone circle can be seen at other sites in the area including Cothiemuir Wood, and Loanhead of Daviot. As with the Clava Cairns, Scilly Entrance Graves, and some late passage graves, the reuse of stones carrying simple cup-and-ring style rock art placed in significant positions during the construction of these new monuments suggests another



**Figure 72** Food Vessels (1–4), Collared Urns (5–70), enlarged Food Vessels (10–11), and Cordoned Urn (12). [After Burgess 1980, figs. 3.1 and 3.3]

link backwards in time to earlier traditions. At Rothiemay, Aberdeenshire, there are 119 cup-marks on the recumbent slab, at Sunhoney, Aberdeenshire, more than 30 cup-marks cover the recumbent slab, while at Tomnaverie more than two dozen cup-marked panels were recognized within 200m of the circle. Whether these communities with interests in lunar events were considered different in some way by those who preferred the dark side of the moon and the clear light of day is unclear, but certainly this second group seems to have been in the majority across Britain as a whole.



**Figure 73** Recumbent stone circle at Tomnaverie, Aberdeenshire, after the excavation and restoration of the monument in 1999–2000. The stone platform cairn was transformed by the addition of the stone circle, probably in the early second millennium BC. [Photograph courtesy of Richard Bradley. Copyright reserved]

## SETTLEMENT AND ECONOMY

The opening up of the landscape for farming and animal husbandry quickened in pace during the early second millennium BC with increasing emphasis on land division and the creation of agricultural infrastructure in the form of fields and paddocks. The early sub-Boreal biostratigraphic division (Pollen Zone VIII) saw the climate become more continental, warmer with dryer summers that reached a peak for postglacial times around 1500 BC when average summer temperatures were perhaps two or three degrees warmer than today. This allowed intensive exploitation of land at altitudes of up to about 300m OD, the most extensive high-altitude land use known in Britain.

The early second millennium is poorly understood in terms of its settlements. Some areas may have been dominated by peripatetic pastoralist societies with few if any permanent settlements. Temporary structures have been found within and around upland areas suggesting that simple transhumance may have developed to exploit the dual resources of upland summer pasture and lowland winter shelter. At Rhos-y-Clegyr, Pembrokeshire, on the coastal plain of south-west Wales the wall bases of no fewer than seven structures were found clustered around a 3m high

A



**Figure 74** Standing stones. A: Rhos-y-Clegyrn, Pembrokeshire; B: Stackpole Warren, Pembrokeshire, the standing stone was set up some time between 1400 BC and 900 BC, after which the trapezoidal stone setting was constructed. Scale totals 2m. The line oval pit in the foreground contained a burial dated to the mid second century BC. [Photograph by (A) Timothy Darvill and (B) courtesy of Don Benson (Dyfed Archaeological Trust). Copyright reserved]

B



standing stone (74A). These houses were not contemporary with each other suggesting that the camp had been visited over a considerable period, and other standing stones, posts, cairns, and cremation burials were added piecemeal as time went by. It raises the interesting possibility that at least some other standing stones acted as markers to establish the position of a traditional

campsite, guarding the spot while its users were away. Other excavated examples also show traces of occupation and burials, and what more fitting place for mobile communities to inter and commemorate their dead than at the traditional camp. In Wales over 250 single standing stones have been recorded, most on ground below 250m OD, and many more are known across western and northern Britain. In the south and east of Britain their place may have been taken by wooden posts. For North Wales, Emrys Bowen and Colin Gresham have shown that standing stones occur along the principal routeways into the uplands, and in this sense they were not only markers of camps but secure indicators of movement through the landscape. It is quite possible that some of the open-air panels of rock art on earthfast boulders and outcrops in upland Britain are also signposts in the landscape indicating the position and extent of customary grazing areas and routeways, while Andrew Fleming has suggested that some of the large round barrow cemeteries found in southern Britain were constructed at seasonal meeting places for otherwise dispersed communities.

But extensive pastoralism was not universal. At Stackpole Warren, Pembrokeshire, for example, three roundhouses are known. One was well-preserved, 5m across, a timber-framed structure with its floor slightly sunken into the ground and an entrance opening to the north-east. Fragments of at least 17 Collared Urns lay scattered across the floor. On the opposite site of the country a similar roundhouse is known from Newark Road in Fengate, Peterborough. Surrounded by an eaves-drip gully 9m across, it is slightly larger than the Stackpole example, but the arrangement of posts forming the timber frame is similar; the entrance opened to the south-east, and there was evidence of an external porch. An animal byre stood close by to the north, and there were pits, postholes, and stakeholes round about. The settlement was associated with a small fieldsystem comprising at least seven paddocks separated by droveways and boundaries marked by ditches that originally flanked hedges or hedge-banks; one field contained a well. Other settlements of the period are known at Kilellan Farm on Islay, Argyll and Bute, associated with Food Vessels, and Gwithian, Cornwall, and Swarkeston, Derbyshire associated with Collared Urns.

Animals seem to have played a larger role in the economy than crops, and cultivation plots remain fairly small. Hunting may have contributed to everyday subsistence, but it was also a ceremonial activity. In west London, excavations at Holloway Lane in Harmondsworth, Hillingdon, in 1987 revealed an oval pit, 2m deep, containing the butchered remains of an aurochs three to four years old at death that had been killed by six arrows tipped with barbed and tanged flint arrowheads. This must have been one of the last surviving aurochs in Britain and since the horns and meat-rich parts such as the upper legs had been removed may well have been trophy-kill.

## INDUSTRY, TRADE, AND CONTINENTAL CONTACTS

Despite the poverty of occupation evidence much can be said about the industries and trade-links of the early second millennium BC because abundant personal wealth and material culture was buried with the dead, some of it quite spectacular. The axis of cross-channel contacts between southern Britain and the near continent established in preceding centuries developed to the point where many

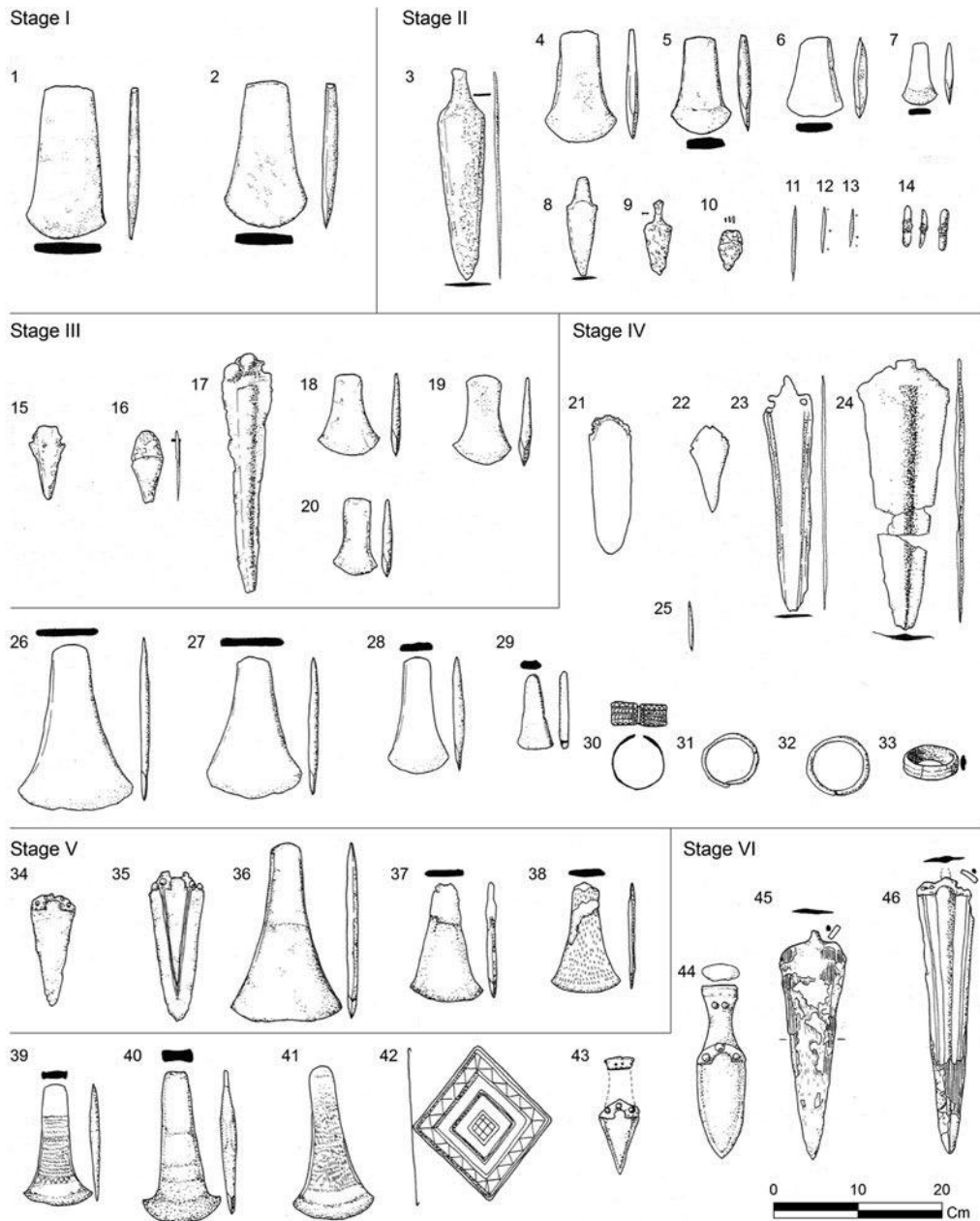


innovations in metallurgy ran parallel on either side of the water. Similarities can also be seen in the construction of burial monuments. In the 1930s Stuart Piggott spoke in terms of an ethnic movement from northern France to southern Britain by an aristocratic minority who formed an intrusive ruling class delighting in barbaric finery, while others have contemplated a single Armorico-British cultural province spanning northern France and south-central Britain. However, while there are numerous similarities between the two areas the small quantity and limited range of direct imports from the Continent to Britain is interpreted by Stuart Needham as a form of materialism that was not economic but rather rooted in the belief that exotic objects somehow entrapped power and carried mystical forces that were deemed to control the universe and thus allowed some people to control others.

Between the nineteenth and sixteenth centuries BC links across the Channel were part of a far-reaching chain of connections that locked Britain into a wide exchange network and opened the doors for British craftspeople to experience influences direct from central Europe, especially for the development of pins, spears, and daggers, which across much of north-west Europe follow central European fashions. More distant connections through to the Mediterranean have also been claimed, but the evidence is scant and does not stand up to close scrutiny. Faience beads were once believed to derive from the Mediterranean but were in fact manufactured in several parts of Europe. Keith Branigan has claimed links between the Aegean and southern England on the basis of four bronze double-axe heads of Aegean style from Britain, but since none derive from secure archaeological deposits they could all be recent imports by collectors. Other small items in the form of beads, pendants, and amulets of amber and other materials may well originate in distant lands, but are exactly the kind of items that travellers and pilgrims might pick up or be given as a reminder of their journey. Thus such items are evidence not so much of trade as of routine movements along favoured routes. Among the larger items that were moved alongside are a handful of distinctive Armorican-handled pots (*vases à anses*), and pieces of Niedermendig Lava from the Rhineland as quernstones. Scandinavian flint daggers may have been imported or at least have influenced the manufacture and use of such items in Britain, and at least six stone battle-axes imported directly from central and northern Europe have been recognized among hundreds of locally made copies. Both daggers and battle-axes were probably ceremonial equipment used for dispatching people or animals and thus had special purposes as well as special value. In the other direction, Cornish tin and Welsh copper and gold were presumably exported.

Boats must have played a major part in cross-channel contacts, and the remains of two are known from this period. Part of a plank-built boat of oak was found in 1996 at Kilnsea, East Riding of Yorkshire, in the Humber Estuary, dated to 1870–1670 BC. More fragmentary are the timbers from Caldicot, Monmouthshire, on the Severn Estuary dated to 1880–1690 BC.

Metalworking expanded rapidly after 2000 BC (75). Building on the achievements of the pioneering five Metalworking Stages (I–V) of the late third millennium BC, continental influences, new demands, and increasing competency meant that a further two stages can be seen between 2000 BC and 1550 BC: the Falkland-Willerby Wold industries of the West Overton Period and the Arreton Down industries of the early Bedd Branwen Period (Table G). Copper mining to feed these industries is known at nearly a dozen sites in western Britain, among them Great Orme, Conwy;



**Figure 75** Typical products of Metalworking Stages I–VI from Britain and Ireland. Stages I–III copper, including: axes (1, 2, 4–7, 18–20), knife/daggers 3, 8–10, 15–17), awls (11–13), and gold earrings (14). Stages IV–VI bronze, including: daggers (21–4, 36, 37, 45–8), axes 26–9, 38–40, 41–3), awl (25), and gold ornaments (30–5, 44). Scale approximate. [After Burgess 1980, figs. 2.13, 2.14, and 3.7]

**Table G.** Summary of the main Metalworking Stages and industrial phases in Britain between 3000 BC and 600 BC. [Sources: Burgess 1980; Needham 1996; Needham *et al.* 1997]

| Date (BC) | Industrial phase/period    | Metalworking stage | Metalworking industries, regional traditions, and contemporary continental phases                                                                                                                                                                                                                                                                                                                                                           | Pottery styles                                  |
|-----------|----------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| 800–600   | Llyn-Fawr phase            | XIII               | Widespread metalworking industries with little evidence of regional diversity; during this period iron begins to be worked on a large scale. Strong links to late Hallstatt C and Hallstatt D on the Continent.                                                                                                                                                                                                                             | Decorated Post Deverel-Rimbury (DPDR)           |
| 1000–800  | Ewart Park phase           | XII                | Carp's Tongue/Bexley Heath industries in south-eastern England; the Llantwit-Stogursey industries in the west of England and south-east Wales; the Broadward industries of the Welsh Marches; Heathery Burn industries in northern England; Duddington, Covesea, and Ballimore industries in Scotland; and the Dowris industries in Ireland. Some early use of iron. Links to late Urnfield Culture and early Hallstatt C on the Continent. | Plain Post Deverel-Rimbury (PPDR)               |
| 1150–1000 | Wilburton-Wallington phase | XI                 | Wilburton and Wallington industries in England; the Poldar industries in Scotland; Roscommon industries in Ireland. This period sees the extensive use of lead-bronze and perhaps some early use of iron. Links to Hallstatt A2 on the Continent.                                                                                                                                                                                           |                                                 |
| 1300–1150 | PENARD PERIOD              | X                  | Penard industries throughout the British Isles. Links to the early Urnfield Cultures on the Continent; Montelius III; Rosnoën in northern France; Hallstatt A1/A2.                                                                                                                                                                                                                                                                          | Deverel-Rimbury (DR)                            |
| 1400–1300 | KNIGHTON HEATH PERIOD      | IX                 | Taunton industries in southern England; Barton-Bendish industries in eastern England; Glentool industries in Scotland; Bishopsland industries in Ireland. The ornament horizon. Links to Frøjk-Ostenfeld Group of Montelius IIb-c in northern Europe; Tumulus Culture C stage in central Europe.                                                                                                                                            |                                                 |
| 1650–1400 | BEDD BRANWEN PERIOD        | VIII               | Acton Park industries in England; Killymaddy industry in Ireland; Caverton industries in the Scottish borders; Auchterhouse industries in Scotland. Links to the European Tumulus Culture/Reinecke B1.                                                                                                                                                                                                                                      |                                                 |
|           |                            | VII                | Arreton Down industry in southern Britain; Inch Island industry in Ireland; Ebnal industry in Wales and the Marches; Gavel Moss industry in Scotland. Wessex Culture: Snowhill-Camerton daggers. Links to Reinecke A2/B1 or A3 on the Continent.                                                                                                                                                                                            | Late Beakers, Food Vessels, Collared Urns, etc. |
| 2000–1650 | WEST OVERTON PERIOD        | VI                 | Falkland-Willerby Wold industries. Wessex: Armorico-British dagger series; Bush Barrow daggers. Influences from classic Únětice/Reinecke A2 metalwork on the Continent.                                                                                                                                                                                                                                                                     |                                                 |
| 2750–2000 | MOUNT PLEASANT PERIOD      | V                  | Ballyvalley-Aylesford-Colleonaard industries.                                                                                                                                                                                                                                                                                                                                                                                               | Beakers                                         |
|           |                            | IV                 | Migdale-Marnoch/Migdale-Killaha industries (copper, bronze, gold). Links to early Únětice/Reinecke A1 on the Continent.                                                                                                                                                                                                                                                                                                                     |                                                 |
|           |                            | III                | Frankford industries (copper).                                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |
| 3000–2750 | MELDON BRIDGE PERIOD       | II                 | Knocknague/Lough Ravel industries (copper).                                                                                                                                                                                                                                                                                                                                                                                                 | Impressed Wares and Grooved Ware                |
|           |                            | I                  | Castletown Roche industries (copper).                                                                                                                                                                                                                                                                                                                                                                                                       |                                                 |

Parys Mountain, Isle of Anglesey; Nantyeira, Ceredigion; Cwmystwyth, Ceredigion; and Alderley Edge, Cheshire. The Great Orme mines were the most extensive covering more than 24,000m<sup>2</sup> with more than 5km of underground passages and shafts reaching depths of 70m below the surface. It has been estimated that between 1700 BC and 700 BC more than 40,000m<sup>3</sup> of rock was extracted and at their peak in the mid second millennium BC these were probably the biggest copper mines in Europe. Setting fires against rock to be removed, quenching the hot surface with water, hammering with stone mauls, and prizing blocks from rock faces with wooden picks and wedges was the main extraction technique, after which the rock extract was crushed and hand-sorted, and visible pieces of ore collected for smelting. A wooden shovel dated to 2025–1536 BC (OxA-4050: 3470±90 BP) was found in early workings at Alderley Edge, Cheshire, in AD 1878 and then adorned the walls of a local primary school for decades before its significance was recognized.

Tin was undoubtedly worked in Cornwall, but since extraction focused on placer deposits worked by panning and surface collection no trace of the workings themselves has been found. Gold was worked at Dolaucothi, Carmarthenshire, from about 1000 BC onwards, although the streams on the western edge of the Mountains of Mourne (Co. Down), Ireland, provided the main source of gold in the British Isles during the early second millennium BC.

Bronze (an alloy of copper and tin, later also with small amounts of lead and arsenic) replaced copper as the dominant kind of metal before 2000 BC. Although nowadays such metal objects tend to be green and rather dull, originally they were shiny, bright, and a yellow-gold colour. Indeed, the alloying of metals may well have been an early example of alchemy where smiths in a sense succeeded in turning base metal into gold (or at least something that looked like it!).

Gold was used to make ornaments, especially sheet and foil objects such as lozenges, belt fasteners, button covers, and settings for amber and shale ornaments. Two gold cups found in burials at Rillaton, Cornwall, and Ringlemere, Kent, dating to about 1700 BC show inspiration from Beakers and contemporary continental sources. Similar precious cups were also made in shale and amber, a task requiring just as much skill and signalling that drinking was an activity imbued with prestige. Perhaps the pinnacle of the goldworker's craft is the Mold Cape, a gorget dating to c.1800 BC found in a barrow at Mold, Flintshire, in 1833. Weighing nearly 0.6kg, the piece is heavily decorated with bands of rings and bosses executed in repoussé style from the back. There are many other stunning pieces of the period though, including the neck-bands known as lunulae because of their crescent-moon shape that were made in Ireland and in a dozen or more cases exported to Britain. Equally impressive are the two gold lozenges from Bush Barrow, Wiltshire. The larger of these carries a series of concentric parallelograms that Alexander Thom and colleagues suggested might have been a kind of astrolabe used in determining a solar calendar of 16 months. A similar jet lozenge-shaped plaque found in 2006 in a pit at South Lowestoft, Suffolk, shares many features with the Bush Barrow lozenge, suggesting that perhaps such cosmologies were widely recognized. Indeed, the slightly later Nebra Disk from the Mittelberg (Saxony-Anhalt), Germany, also provides a model of the heavens in a portable format.

Stoneworking continued too. Battle-axes in a variety of forms and heavy axe-hammers were made from a range of igneous and metamorphic rocks, in some cases from established sources

that had been exploited for more than a millennium but also including new materials such as picrite from Corndon Hill, Shropshire, and camptonite from near Nuneaton, Warwickshire.

Collectively, these beautifully made items show the wealth and status of individuals and lineages, and it seems clear that many people literally wore their wealth around their necks or on their clothes. This was the original bling society. But not all kinds of object appear in all parts of Britain. Subtle regional variations exist in the kinds of items used and the way they were used. These areas are not yet sufficiently well-defined that it is possible to start talking of tribal territories, but broad regions that can be identified, as much environmental as social at this stage. These have resonance in the kinds of pottery preferred and also in the kinds of burial monuments and ceremonial structures built.

### **LIFE, DEATH, RITUAL, AND REGIONAL IDENTITY 2000–1500 BC**

Some of the ceremonial sites and burial structures characteristic of the third millennium BC continued to be built and used through the early second millennium but often in modified form. Interest in henges, henge enclosures, stone circles, cursuses, and long mounds continued, and is often represented archaeologically by the deposition of burials associated with one or other of the various styles of urns and funerary vessels of the period. None seem to have been built after about 2000 BC, although some were structurally modified. For example, two rings of pits were added around the central stone setting of Stonehenge, Wiltshire, the Z-Holes in 2000–1750 BC and the Y-Holes around 1640–1520 BC. A horseshoe-shaped stone cove was built in the centre of Mount Pleasant IV around 2200–1780 BC (BM-668: 3630±60BP), and at Ringlemere, Kent, a low round mound was constructed over the central area of the former henge in a style reminiscent of earlier works on a far grander scale at Bryn Celli Ddu, Isle of Anglesey, and Maes Howe, Orkney Islands (see Chapter 5).

Round barrows, *tumuli* as they are sometimes known, provide the principal burial monument of the early second millennium BC, with numerous regional varieties recognizable either singly or in cemeteries (76). Simple bowl-shaped examples predominate, often with a surrounding ditch providing material for use in constructing the mound. More elaborate examples are generically referred to as ‘fancy barrows’, numerous regional expressions being defined by differently shaped mounds, the presence of platforms, the use of encircling banks as well as ditches, the size and position of the mound within the earthwork, and in the case of ring-cairns the absence of a central mound altogether. Some of these types find close parallels across the English Channel and North Sea in northern France and the Low Countries. Special interest has focused on barrows whose mounds were structured and strengthened with concentric rings of stakes supporting light fencing or hurdlework. These stake-circle barrows may be an instance of a British tradition being copied by communities on the Continent who also used similar styles of pottery: Wessex Biconical Urns in Britain, Hilversum Urns in the southern Netherlands and Rhine delta. Both in Britain and on the Continent many individual barrows witnessed extended and complicated ceremonies and rituals. There were clearly many rules, precedents, and taboos surrounding the way



**Figure 76** Barrow cemetery at Oakley Down, Cranborne Chase, Dorset. Bell barrows, bowl barrows and disc barrows can be seen. There were originally at least 26 barrows in the cemetery. [Photograph courtesy of the Cambridge University Collection. Copyright reserved]

barrows and the burials they contain were created. As well as primary burials at the focus of the monument there are often contemporary satellite burials round about, and secondary and tertiary additions introduced decades or centuries later.

It has long been known that cemeteries formed around a ‘founder’s’ barrow (usually a long barrow or a round barrow of later third millennium BC date), but work by Koji Mizoguchi has shown that there is a rigorous logic to the development of these cemeteries with lines of barrows building out from focal barrows sometimes rather neatly to create linear cemeteries but sometimes from a whole series of focal barrows to produce nucleated and dispersed patterns. It is also notable that some of the largest barrow cemeteries lie on land overlooking the great regional ceremonial centres of the later third millennium. There are more than a thousand round barrows of all shapes and sizes in over 25 cemeteries overlooking Stonehenge, Wiltshire, for example, as if proximity to such places in death was an assurance of eternal life.

Burial rituals were complicated and elaborate. Cremation became the preferred rite, and traces of the pyres on which corpses were burnt are sometimes detected. In many cases the cremated remains were simply gathered up and deposited in a small pit; more often they look to have been contained within a bag, basket, or ceramic vessel. For inhumations, biers were generally used to transport corpses to their graves, but wooden coffins are also known variously made from planks, a hollowed log, or, exceptionally, a wooden canoe. Grave goods include items owned by the deceased as well as symbolic deposits made by the mourners, especially amulitic objects such as beads taken from a personal necklace and placed in the grave.

Round barrows do not always cover burials. At the Buckskin Barrow, Hampshire, Mike Allen has shown that the barrow was raised over the remains of a feasting event, perhaps focused around a totem pole set within a small fenced enclosure associated with Collared Urns.

Stone circles continued to be built and used through the early second millennium BC, generally small rings with relatively few stones and no marked entrance. Examples include the Nine Ladies on Stannon Moor, Derbyshire, about 11m across, and Nine Stones, Dorset, about 8m across. Where stones were not available timber circles were built, again continuing a tradition well established in the late third millennium BC. At Charnham Lane, West Berkshire, for example, seven posts are arranged in a circle 6m across, associated with two Aldbourne Cups dated to 1740–1530 BC (BM-2737: 3360±40 BP).

Linear monuments found a new expression in stone rows and post rows. Short rows with anything between three and six stones over distances of between 3 and 175m are known across Britain, for example at Harold's Stones near Trellech, Monmouthshire (77A), and the Devil's Arrows near Boroughbridge, North Yorkshire (77B). Single, double, triple, and multiple lines



**Figure 77** Stone rows. A: Harold's Stones, Trellech, Monmouthshire; B: The Devil's Arrows, Boroughbridge, North Yorkshire; C: Merrivale, Dartmoor, Devon. [Photographs by Timothy Darvill. Copyright reserved]

are known and some overlie simple burial monuments and variously line up with stone circles or prominent cairns (77C). Cholwichtown, Devon, with 91 stones spread over 215m, and Craddock Moor, Cornwall, with 85 stones over 244m, are fairly typical. Few have been dated, but at Ardnacross on Mull, Argyll and Bute, a row of three stones had collapsed before 1140–820 BC (OxA-3879: 2800±65 BP). In lowland Britain the examination of large areas through commercial archaeology has revealed post rows of identical form and size, as for example at Barleycroft Farm near Needingworth, Cambridgeshire, where nine rows were recorded by the Cambridge Archaeological Unit in advance of development works: they varied in length from 77.5m to 129m. Three similar post rows between 11m and 81m long and with between 16 and 107 posts were found at Hartshill Copse near Bucklebury, West Berkshire, by Cotswold Archaeology, in advance of gravel quarrying. And at Monkton, Kent, a line of 19 postholes formed a post row with a barrow at one end.

Stone pairs also seem to date to this period, although again it is often hard to be sure. They are found mainly in Cornwall, Wales, southern and central Scotland, the Hebrides, Orkney, and Shetland, but wooden versions are very probably represented elsewhere and deserve to be better recognized. Such pairs of standing stones or posts often mark the boundary between contrasting environments: a terrace edge overlooking a valley floor, or a hilltop where the land changes gradient. As such they might well have formed symbolic doorways or gateways in the landscape, structuring and directing movement while imparting purpose and meaning to those who passed that way.

Rock art is found on stone components of burial monuments and ceremonial structures built during early second millennium BC, and it is strongly suspected that timber monuments now lost to us would have carried similar designs. Sometimes, especially in the construction of cists or kerb edging round barrows, decorated stones taken from earlier monuments or broken from outcrops and earthfast boulders were used, often with motifs millennia-old in cup-and-ring or Galician style. Often, the decoration would have been invisible once the monument was completed but presumably the images still held meaning. New motifs also appear at this time as what is called single-grave art (78). They include naturalistic motifs including human footprints, axes, and daggers.

As with pottery styles and ornaments, there are regional preferences for particular kinds of burial monuments and ceremonial structures. Six main regions can be identified (see 70).

## **Wessex**

The large swathe of central southern England from the eastern Cotswolds and Thames Valley southwards to the Channel coast between Bridport and Brighton was the heartland of what Stuart Piggott referred to in 1938 as the Wessex Culture (see above). Later work by Arthur ApSimon and others suggested a binary division of the Wessex Culture into two stages (Wessex I and II) based on changing styles of metalwork and burial rite. More recent work has challenged the sequence and dating of the metalwork and the burial monuments, but most devastating to the original model was the recognition that gold objects from both stages had in fact been cast from





**Figure 78** Single-grave style rock art of the later third and second millennia BC. A: Main motifs; B: Aspatria, Cumbria; C: Pool Farm near Priddy, Somerset; D: Badbury, Dorset. [After Simpson and Thawley 1972, figs. 2, 7 and 10; Burl 1997, fig. 2b; Darvill 2006, fig. 47; and RCAHMS 1999, 36–7]

the same metal from the same crucible. Unless there was a complicated pattern of recirculating metal and holding on to heirlooms it is hard to explain this other than as evidence of simultaneous production. In light of this evidence the apparent differences in material culture between Wessex I and II are more easily explained in terms of status differences linked to wealth and gender within a geographically coherent if fuzzy-edged region.

Barrows in Wessex include conventional bowl barrows as well as a range of fancy barrows known as bell barrows, disc barrows, saucer barrows, and pond barrows. The last-mentioned is a reversal of the usual upstanding mound being characterized instead by a hemispherical depression. Something of the balance of barrow types represented can be glimpsed from the cemetery

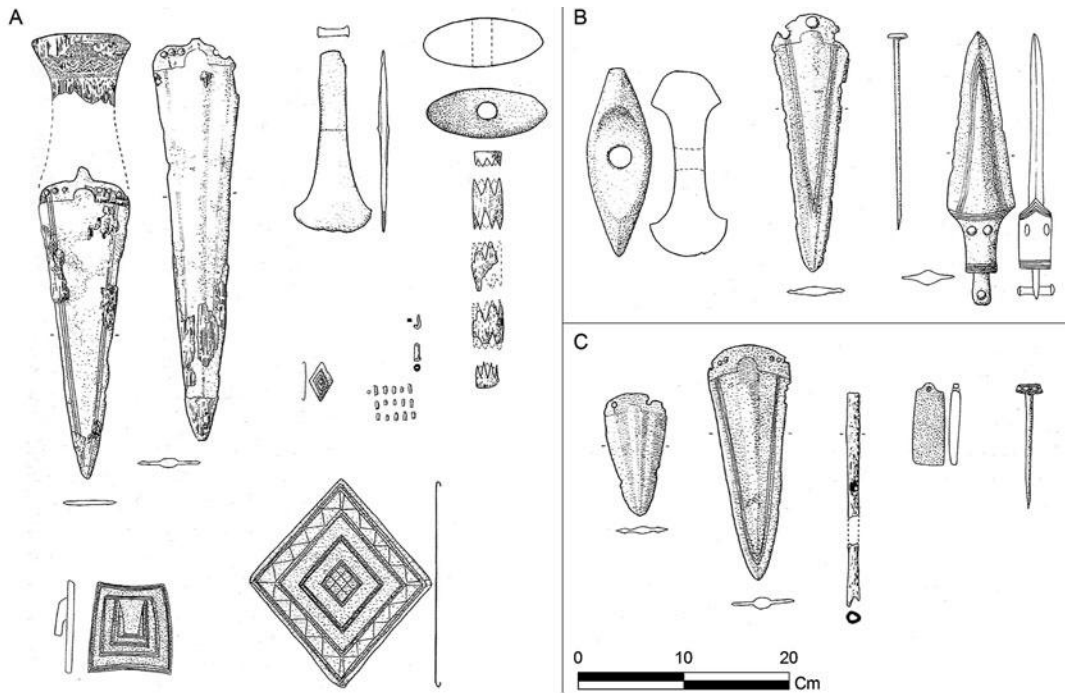
of 31 extant mounds at Snail Down, Wiltshire, investigated by Nicholas Thomas between 1953 and 1957. Here, 19 (61 per cent) were bowl barrows, and the remainder fancy barrows including 6 bell barrows, 3 saucer barrows, 2 disc barrows, and 1 pond barrow.

About 100 richly furnished graves have been identified in this region, a dozen with objects made of gold, and almost all under individual round barrows in linear or nucleated barrow cemeteries. Among the richest is Bush Barrow in the Wilsford cemetery near Stonehenge, Wiltshire (79A). The burial was that of an adult male, unusual in that the body was laid directly on the ground rather than in a grave pit. The corpse had been accompanied by three daggers, one with its handle inlaid with gold wire, a leather helmet represented by rivets, a lozenge-shaped sheet-gold plate with impressed decoration, a gold belt hook, a small gold lozenge, a stone macehead with bone fittings from the handle, and a bronze axe. The range of objects from other graves in Wessex includes crutch-head bronze pins, bronze awls, bone pins, gold and amber ornaments, perforated whetstones, polished stone axe-hammers, battle-axes, bone tweezers, ogival-bladed daggers, amber and faience beads, bulb-headed pins, and, at Wilsford 23, Wiltshire, a bone whistle (79C). An unusual grave at Upton Lovell G2, Wiltshire, seems to be that of a shaman with some involvement in metalworking. Alongside a fairly conventional range of items including two battle-axes, beads, bone points, and a bronze awl, it contained four archaic flint axes, more than 40 perforated bones thought to have fringed a tunic or cloak, nine rubbing stones, a whetstone, and what seems to be the remains of a small bag of pieces of bone and stone, some of which had been broken in half.

At least four cups of amber or shale have been found in Wessex, reinforcing the complicated network of foreign connections enjoyed by those living in central southern Britain also clearly visible in the assemblage of six items from the Clandon, Dorset, studied by Stuart Needham and Ann Woodward. Here the bronze dagger, gold lozenge, jet macehead with gold-covered shale studs, amber cup, ceramic accessory vessel, and Collared Urn suggest a record of great exploits through distant travel along the east coast of Britain, the Irish Sea Basin, and across the Channel to Armorica and Frisia. Rich graves are also known at Hove, Brighton and Hove, in the east and at Snowhill, Gloucestershire (79B), to the north, both defining the outer reaches of a region that naturally divides into a maritime-influenced coastal Wessex and a less well-connected inland Wessex.

The ceramic sequence in Wessex includes a wide range of primary series Collared Urns, especially numerous towards the eastern side of the region, and a large number of secondary series Collared Urns in the South Eastern style. Accessory Cups (also known as Miniature Vessels or Pygmy Cups) sometimes deposited alongside urns in burial contexts include Aldbourne Cups, perforated wall cups, grape cups, and simple plain cups. The small size and overall character of these vessels led Carol Allen and David Hopkins to suggest that they might be connected with drinking and smoking rituals, equipment so personal that it was taken to the grave. Food Vessels are sporadically represented, mainly in bipartite forms with sparse decoration; also Cordoned Urns and Wessex Horseshoe-handled Urns (also known as Wessex Biconical Urns).

Some existing stone circles in the region continued to be used and new ones were created in west Dorset. Excavations at Hampton Down, Dorset, in 1967 revealed a ring 7m across with



**Figure 79** Grave goods from rich graves of the early second millennium BC in the Wessex region. A: Bush Barrow, Wiltshire. B: Snowhill, Gloucestershire; C: Wilsford G23, Wiltshire. [After Gerloff 1975, plates 45 and 47]

nine stones. A post circle at Hungerford and the timber rows at Bucklebury have already been mentioned and suggest that more remain to be found. Standing stones and stone pairs did not figure in the rituals and ceremonies of this region, but may have been replicated in timber. Single grave style rock art is rare, but important panels include a decorated cist cover from Badbury, Dorset (78D), and three panels on the trilithons and seven on the uprights of the Sarsen Circle at Stonehenge, Wiltshire; motifs include axes, daggers, and a possible ‘buckler-motif’ similar to examples recorded in Brittany.

### ***South-west England***

From the Quantocks and Blackdown Hills of west Somerset and west Dorset westwards through Devon and Cornwall was a largely upland region rich in natural resources. Round barrows are dominated by simple bowl-shaped and flattened-hemisphere forms variously built of earth and turf in the lowlands and turf and rubble in the uplands. Ditches are present where material needed to be quarried. A few bowl barrows are very large and occupy prominent positions making them visible from a long way off. Fancy barrows occur in a wide range of forms, the

details of which have been well documented through detailed surveys on Bodmin Moor where they include: kerbed cairns, platform cairns, rimmed platform cairns, platform cairns with central mounds, kerbed platform cairns, and tor cairns. In many cases the graves within these barrows were constructed as stone-lined rectangular cists.

Rich burials and dagger graves are more common than is often supposed. At Rillaton, Cornwall, a beaten gold cup accompanied an inhumation under a large simple round barrow, while two shale cups of similar design are known from Farway, Devon. A bronze dagger from a burial at Hammeldon, Devon, had an amber pommel with gold-pin decoration. Four gold lunulae have also been found along the north Cornish coast.

The ceramic sequence in this area includes rather few primary series Collared Urns, most of which are from the extreme west of the region, and fewer than half a dozen secondary series Collared Urns. Food Vessels tend to have a bipartite form, angular outline and sparse decoration; Cornish-handled Urns are of barrel-shaped form with horizontally perforated lugs projecting just above the widest point. Accessory Cups are rare.

Late small stone circles are well represented on Exmoor and Dartmoor in Devon, and on Bodmin Moor and in West Penwith, Cornwall. More than a dozen stone rows of various kinds are represented on Bodmin Moor, Dartmoor, and Exmoor. Single grave style rock art is rare with only a handful of sites recorded: Priddy, Somerset, is an elaborate cover-slab with footprint motifs (78C). More common are small portable stone blocks with one or two simple cup-marks on each from round barrows in west Dorset and Devon.

### ***Wales and western England***

The Severn Valley westwards into the Welsh Marches, Cambrian Mountains, and the coastal plains of Wales represents an extremely diverse landscape of vales, hills, and high mountains, parts of which were rich in natural resources of interest to people across Britain in the early second millennium BC. Round barrows in this area are predominantly simple bowl barrows with earthen mounds or stone cairns according to the underlying geology; some have ditches. Well-structured examples with internal post/stake rings are known (80A), and where rings of stone uprights within the mound provide strength they are known as cairn circles. Those with stones edging the mound are kerb cairns. A few impressive barrows are sited on mountain tops, as at Pen-y-Fan and Carn Dû, Powys, and Foel Trigarn and Foel Cwmcerwyn, Pembrokeshire. Fancy barrows are represented as a range of platform cairns and ring-cairns. At Brenig, Denbighshire, a cemetery of 11 round barrows excavated by Frances Lynch in 1973–5 revealed 5 bowl barrows with internal stake circles (45 per cent), 3 small cairns, 1 kerb cairn, 1 platform cairn, and 1 ring-cairn (80B). Unusually, at Bedd Branwen, Isle of Anglesey, a bowl barrow was built around an existing standing stone.

A few rich burials are known, among them one from Mold, Flintshire, already referred to, where the gold cape was seemingly accompanied by a necklace of amber beads. At Pen-y-Bonc,



**Figure 80** Round barrows and ring-cairns. A: Two round barrows under excavation at Trelystan, near Welshpool, Powys. Two stages in the development of the mound in the foreground can be clearly seen, with the primary monument represented by the central stone kerbed structure and the later enlargement represented by the earth mound and concentric rings of stakeholes. B: Reconstructed ring-cairn at Brenig 44, Denbighshire, with wooden posts inserted into the sockets found outside the stone ring-cairn. [Photograph (A) courtesy of Bill Britnell (Clwyd Powys Archaeological Trust) and (B) by Timothy Darvill. Copyright reserved]

Isle of Anglesey, an inhumation was accompanied by a necklace of shale beads, a jet button, a bronze armlet, and two Collared Urns.

The ceramic sequence in this area includes a scatter of primary series Collared Urns, mainly around the Welsh coastlands, and a few secondary series Collared Urns mainly in the North Western style. Food Vessels and Encrusted Urns are well distributed but accessory vessels are rare. A single gold lunula has been found at Llanllyfni, Gwynedd.

Small stone circles are widely scattered through the region in north Somerset, across the Cambrian Mountains of Powys, in north Pembrokeshire along the southern flanks of the Preseli Hills, and in North Wales around the edge of Snowdonia. At the Druid's Circle near Penmaenmawr, Conwy, excavations in 1958 revealed a ring of 15 stones set in a low bank about 25m across. Quartz was scattered through the enclosed area, especially over a cist near the centre which contained the cremated remains of a child and an enlarged Food Vessel Urn. A handful of stone rows, mainly connected with stone circles, are present in central Wales. Single grave style rock art is rare in this region, although reused cup-marked slabs have been found forming the walls of a cist at the Simondson Cairn near Coity, Bridgend, and in the kerb of a bowl barrow at Crick, Monmouthshire.

### ***Midlands, East Anglia, and south-eastern England***

From the Weald of Kent northwards across the North Downs and on through the great river valleys of eastern England as far as the Humber Estuary much of the landscape is low-lying but,

while agriculturally rich, is relatively poor in natural resources. The poverty of robust building materials and the heavy impact of later cultivation has levelled most sites. Round barrows are now mainly represented as ring-ditches, making it hard to know what kind of mounds once stood within them and how many simple bowl barrows without encircling ditches there might originally have been. Surveys by Leslie Grinsell show that in Kent less than 1 per cent of round barrows are fancy barrows, and Andrew Lawson's work on the barrows of East Anglia shows a similar picture. Investigations at Cossington Quarry, Leicestershire, showed that a small cemetery of three round barrows beside the River Wreake had originally been situated within woodland and used over and over again, no doubt making them rich in memories, myths, and meanings for the living population.

A fair number of rich burials are known: Rochford, Essex, with gold and amber beads; Little Cressingham, Norfolk, with gold hilt-mountings on a dagger, a rectangular gold breastplate, a necklace of amber beads, and the remains of a gold box; and Bircham, Norfolk, with gold foil-covered beads. At Lockington, Leicestershire, excavations in 1994 brought to light a small pit containing two incomplete pots, two gold armlets, and a copper dagger with attached fragments of an organic scabbard dated to 2190–1880 BC (OxA-6447:  $3630 \pm 55$  BP). Within a century or so a ditched bowl barrow had been raised on the site, although no associated burial was found. A gold cup from Ringlemere, Kent, found in a mound post-dating a henge monument may have been associated with an amber dagger pommel and an amber pendant, originally perhaps in a grave.

The ceramic sequence in this area includes a wide range of primary series Collared Urns and many secondary series Collared Urns in the South Eastern style. Food Vessels are comparatively rare but Biconical Urns figure prominently, especially those decorated with fingernail impressions and rustication.

No stone circles are known in this region, but timber circles of the early second millennium BC include Site 3 at Dorchester-on-Thames, Oxfordshire. Likewise, there are no stone rows, but as already mentioned post rows have been recorded at Barleycroft Farm, Cambridgeshire. Single grave style rock art is scarce because of the poverty of suitable stone, but at Lockington and Tugby, Leicestershire, portable slabs with single cup-marks were incorporated into round barrows.

### ***Northern England and southern Scotland***

An upland spine from the Pennines of the Peak District to the southern uplands of the Scottish Borders is flanked east and west by coastal plains punctuated by upland outliers such as the Yorkshire Wolds and the North York Moors. Localized natural resources in the form of metal ores are known in the southern part of this territory, while the rest comprises mixed topography. Round barrows are generally simple bowl-shaped forms and kerb cairns, often slightly flattened and inevitably built of local materials. Many are set in conspicuous positions and cover

slab-lined cists or burial pits. Fancy barrows are rare, but include ring-cairns and bell-shaped mounds.

Some ring-cairns in this region are better described as enclosed cremation cemeteries. They consist of unfaced ring-banks surrounding scatters of low cairns piled over simple cremations in pits. A narrow entrance passage through the bank, sometimes edged with stone slabs, allows access to the central area. The example at Weird Law near Tweedsmuir, Scottish Borders, dates to 1970–1520BC (NPL-57: 3440±90 BP), and one at Whitstanes Moor, Dumfries and Galloway, is a little later at 1874–1414 BC (GaK-461: 3310±90 BP). At Ewanrigg near Maryport, Cumbria, a flat cemetery of 28 burials including 26 cremations and 2 inhumations was associated with Collared Urns and Food Vessels.

Rich burials include a barrow at Kellythorpe, East Riding of Yorkshire, the last resting place of an adult male who was accompanied by a late Beaker, a wristguard with gold-headed rivets, a copper knife/dagger, and amber buttons. At Mellor, Stockport, a burial within a stone-lined cist discovered in 2008 had a necklace of amber beads of various forms brought together on a single string. Gold pommel mounts were used on daggers found in graves at Collessie, Fife, and Skateraw, East Lothian. The collection of more than 30 jet buttons and pulley-rings from a grave at Harehope, Scottish Borders, would have provided impressive ornamentation on a tunic or cloak. More typically, a barrow investigated by Stan Beckensall in 1984–6 at Old Bewick Moor, Northumberland, contained five cists; one with a Food Vessel and amber beads, another with a jet necklace and flint knife.

The ceramic sequence in the area includes a wide range of primary series Collared Urns and a large number of secondary series Collared Urns in both the North Western and South Eastern styles. Food Vessels and Food Vessel Urns are widespread and form the dominant ceramic style in the region, especially the distinctive Yorkshire Vases with a shoulder groove. Northern Tripartite Vases are more common in the east while Scottish–Irish Bowls dominate in the west. Accessory Cups are common and diverse in form. Gold lunulae have been found at three sites in the region, and copper armlets are known from a dozen sites.

Small late-style stone circles are well represented in upland areas and two are known on the Isle of Man. About 20 four-poster stone circles are known in the region, well illustrated by Three Kings, Jedburgh, Scottish Borders, with a diameter of 4.4m. Timber circles are confined to the interiors of classic henges, although later isolated examples no doubt await discovery. Stone rows and post rows are absent from this region, but single grave style rock art is strong here with more than 30 sites recorded. Slabs decorated with cup-and ring rock art were often reused in the construction of cists, and portable slabs with one or two simple cup-marks frequently deposited in or around the edge of round barrows. At Fowberry, Northumberland, a small kerb cairn was built in the gap between five panels of rock art, partly overlapping two of them, while 20 stones in the cairn itself were decorated with cup-marks and related motifs. Nearby, at Weetwood, Northumberland, 37 mobiliary slabs lay on the surface of a bowl barrow, most face down. Further north, at Balbirnie, Fife, cup-marked slabs were reused in the construction of two cists within a small late-style stone circle of 10 pillars defining a ring 14m across.

### ***Highlands and Islands***

North of a line between Ayr in the west and the Firth of Forth in east, the coastal plain, major river valleys, and island groups provided the main settlement areas through the early second millennium BC. Round barrows are dominated by simple bowl barrows whose mounds are usually made of turf and stone rubble. Ditches are rare, but not unknown. Fancy barrows are dominated by ring-cairns which in this region often have slightly wider banks than those further south. Kerb cairns are also well represented. At Ling Fold, Orkney Islands, a cemetery of 16 round barrows showed that cremation was the dominant mode of burial with a sequence of slab-lined cists in some barrows suggesting a lengthy period of use and reuse. Longevity is also represented at Balneaves near Frioekheim, Angus, where an enclosed cremation cemetery dated to about 1700 BC comprised a penannular ditch with an entrance to the north-east. It was marked by a standing stone, and contained four burials with urns and three without.

Rich graves are present, many containing neckwear. More than 30 disc-bead necklaces of local cannel coal are known from Perth and Kinross alone, most associated with females. At West Water Reservoir near West Linton, Scottish Borders, excavations in 1992 revealed a flat cemetery of nine cists with a mixture of inhumations and cremations associated with Food Vessels. There was evidence of flora tributes in three cists, and one contained a necklace of cannel coal beads among which was a single lead bead, currently the earliest evidence for the use of lead in Britain. At Alloa, Clackmannanshire, gold bracelets were recovered from a cemetery of cist-burials. Copper armlets, often as pairs, have been found at 21 sites. Four gold lunulae have been found in the region, while elaborate jet bead necklaces such as those from Mount Stewart, Argyll and Bute, Melfort, Argyll and Bute, and Pitkenney, Angus, may be imitations of the lunulae.

Dagger burials are widespread. The burial of a 40-year-old man at Rameldry, Fife, was accompanied by a Milston-type dagger dating to 2280–1970 BC, and he was buried wearing a tunic ornamented with five jet buttons and a stone button. At Knowes of Trotty, Orkney Islands, three gold discs together with amber beads and spacer-plates were found accompanying a cremation in a cist under the largest round barrow in a cemetery of 11 mounds. Excavations in 2009 at Forteviot, Perth and Kinross, revealed a large stone-lined cist covered by a capstone weighing more than 4 tonnes (81) within which was a birchwood coffin, the leather sheath for a bronze dagger, and the remains of floral tributes. The capstone itself had rock art pecked into its underside where only the deceased could have appreciated it. Other dagger graves have been found at Seafeld West near Inverness, Highland, where a crouched inhumation was accompanied by a Butterwick-type dagger in a wood and cattle-hide scabbard dated to 1870–1520 BC (AA-29064: 3385±40 BP); at Barnhill, City of Dundee, where a bronze dagger and two gold discs or button covers lay in a stone cist; and at Blackwaterfoot on Arran, North Ayrshire, where a bronze dagger with gold mounts on its pommel was found in the central cist beneath an exceptionally large round barrow.

The ceramic sequence in the area includes a handful of primary series Collared Urns, all from the southern part of the region and a range of secondary series Collared Urns almost exclusively in the North Western style mainly from the east of the region. Food Vessels in various forms are





**Figure 81** Large stone cist excavated in summer 2009 at Forteviot, Perth and Kinross. The capstone weighed about 4 tonnes and had cist grave art on its under side. Inside the cist was the remains of a man laid to rest in a birch bark coffin on a bed of quartz pebbles in sand. He was accompanied by a bronze dagger decorated with a gold band in a leather sheath, wooden objects, and floral tributes. [Photograph courtesy of Kenneth Brophy (Strathearn Environs and Royal Forteviot Project)]

the most widespread ceramic tradition in the area; accessory vessels are rare. Connections across the Irish Sea are emphasized by the widespread presence of Irish-Scottish bowls but evidence of conflicting traditions in the design of pots can be glimpsed in a vessel recovered from a grave at Upper Largie, Argyll and Bute, which combined the characteristics of an Irish Vase in the upper half and a Yorkshire Food Vessel in the lower part.

As well as the RSC of Aberdeenshire already discussed, late stone circles are also found in Tayside, Caithness, and many Hebridean Islands. A few stone rows, usually connected with stone circles, are also found in the Hebrides, while in Caithness and Sutherland there are about 20 multiple stone rows made from small blocks, often arranged so that the lines (sometimes as many as nine) converge on a hilltop barrow or natural mound. At Upper Largie, Argyll and Bute, the remains of a large timber circle nearly 40m in diameter associated with a pair of post rows emphasize that even in areas where stone is widely available timber was sometimes used for the construction of these monuments. Single grave style rock art has been recorded at more than a dozen sites, mainly as single panels. Especially noteworthy is the Nether Largie North Cairn, Argyll and Bute, whose cist cover carries axe motifs. Nearby at Ri Cruin, Argyll and Bute, an

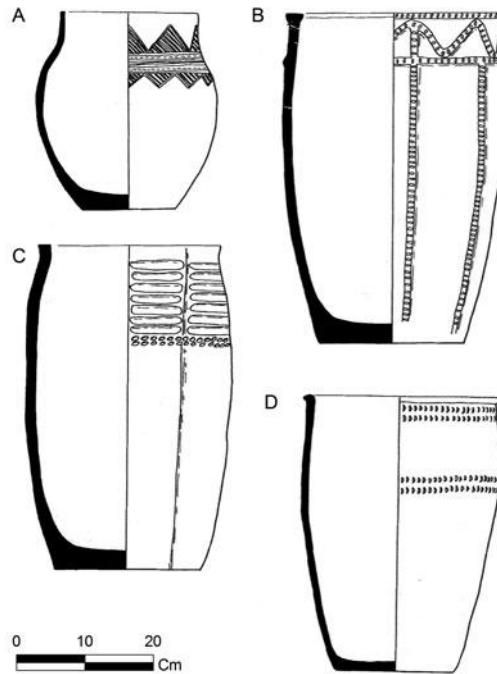
unusual motif described as a groove with shorter strokes at right-angles is probably a boat with people standing in it, and finds parallels among boat motifs in Nordic rock art. At Balbair near Beaulieu, Highland, the side-stone of a cist investigated in 2004 included a strange anthropomorphic motif with a perforation and a cup-mark representing eyes.

## DEVEREL-RIMBURY AND RELATED CULTURES

The middle centuries of the second millennium BC were testing times. The eruption of Santorini in the 1620 BC blew more than half the original island into the sky causing dark skies across the Mediterranean, noticeable as far north as Britain. Culturally, there were shock-waves too as new alliances between central Europe and the Mediterranean world developed and new ideas began to flow between. In Britain at this time new attitudes to the landscape become apparent. In a general sense the land here had been organized and structured ever since people colonized north-west Europe, but after about 1500 BC physical boundaries and formalized systems of occupation become more visible as the relatively open landscape was parcelled up and enclosed by stone banks, hedges, or ditches. The character of the archaeological evidence changes from a body of data dominated by burials and ceremonial structures to one dominated by settlements, boundaries, and fieldsystems. The extensification of farming had perhaps reached a point where the landscape was full and intensification was the only way of supporting larger populations. Moreover, pressures created by the natural push-pull of better agricultural systems and expanding populations may have been exacerbated by changes to the environment: the zenith of the Sub-Boreal biostratigraphic division had passed and over the following centuries the climate gradually become colder and wetter. Those occupying leading positions in society formalized and strengthened their roles, and while gold declined as an indicator of power, new symbols were adopted, notably the possession and conspicuous disposal of fine weaponry and the ability to host feasts and communal gatherings.

Changes are also evident in the preferred material culture. Pottery became more standardized with the appearance around 1500 BC in southern Britain of Deverel-Rimbury Wares (DR) in the form of Bucket, Globular, and Barrel Urns (82), followed around 1150 BC by the appearance of Post Deverel-Rimbury Wares (PDR). Initially these are mainly plain vessels (PPDR) such as bowls, jars, cups, and dishes, but after 850 BC in the Thames Valley and south-eastern England the amount of decoration increases (DPDR) and a wider range of forms including necked jars and shouldered bowls appear as a result of a period of cross-channel interactions. Related traditions appear elsewhere across Britain but they are more conservative in their rate of change and no real equivalence to PDR Wares appear north or west of a line between the Exe and the Humber.

Beyond the DR heartland in Wessex, five broad regional styles can be identified: Trevisker Ware in the south-west; West Midlands Group across western England and Wales; Ardleigh Group in East Anglia; Stainsby and Catfoss Groups in Lincolnshire, Yorkshire and northern England; and the Largs Group, Flat-rimmed Ware, or Covesea Ware in the far north of England and Scotland. Typologically all these traditions owe much to the preceding range of pottery



**Figure 82** Deverel-Rimbury style pottery of mid second millennium BC date. A: Globular Urn; B–D: Bucket Urns. [After Annable and Simpson 1964, figs. 566–9]

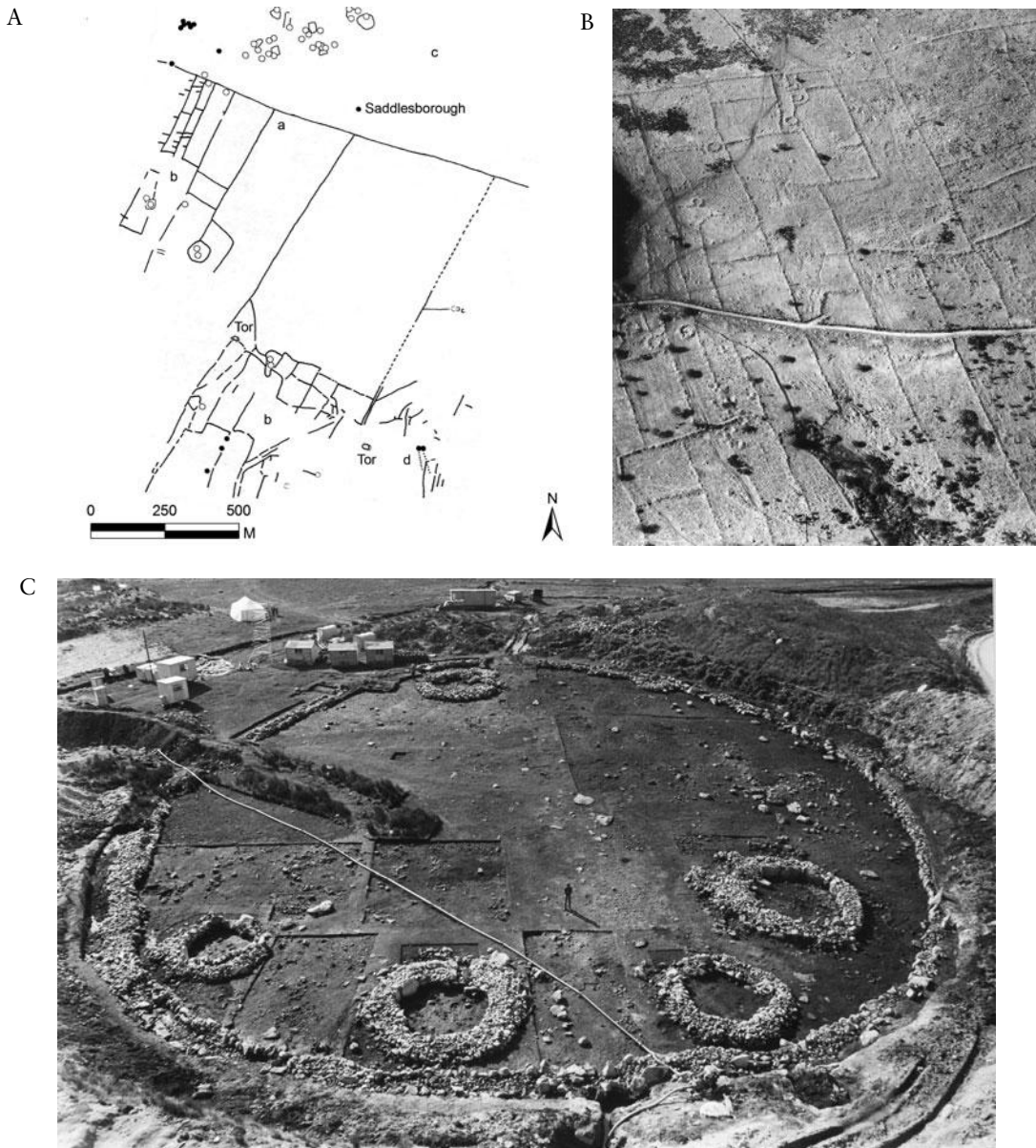
types, especially Biconical Urns of the seventeenth and sixteenth centuries BC, but culturally they indicates a strengthening of regional identity.

## SETTLEMENT, SUBSISTENCE, AND LANDSCAPE ORGANIZATION

Superficially, the settlements and fieldsystems of this early enclosure movement look similar the length and breadth of Britain. Circular houses built of wood or stone – either spread among the fields or clustered together within compounds or ditched enclosures – droveways linking settlement and fields, and small square or rectangular fields were certainly widespread, but beneath these similarities lay marked differences in local subsistence practices.

### *Dartmoor and south-west England*

Some of the most complete evidence for land use at this period comes from Dartmoor, Devon (83). Sometime between 1600 BC and 1400 BC Dartmoor was divided up into ten or so unequal-sized units. Each unit contained valley, hillslope, and open moorland which Andrew Fleming



**Figure 83** Fieldsystems and enclosures of mid second millennium BC date on Dartmoor, Devon. A: Ground plan of the fieldsystem on Shaugh Moor and Wotter Common showing, a: terminal reave, b: parallel reave systems, c: unenclosed moorland (?grazing), and d: stone row. Houses are shown by open circles, barrows and cairns by dots. B: Aerial view of part of Mountsland Common, near Horridge. C: Enclosed multiphase settlement on Shaugh Moor under excavation. [(A) After Collis 1983, fig. 1. Photographs courtesy of (B) Cambridge University Collection and (C) Geoff Wainwright (Central Excavation Unit of the Historic Buildings and Monuments Commission). Copyright reserved]

suggests was used communally, probably for grazing. Dividing the common land from the settlement units were stone banks or reaves. Natural watersheds, rivers, and other reaves marked the sides of each unit, and within the units were settlements and more reaves defining fieldsystems. Perhaps the most surprising thing about the way the landscape was organized is the fact that it seems to have happened as the result of single decision rather through piecemeal extension and the elaboration of a core area.

The largest identifiable unit is around Rippon Tor on the east side of the Dartmoor. It covers some 3,300ha (about 6km by 6km) and includes several settlements. On Dartmoor as a whole over 200km of reaves have been identified enclosing a total of over 10,000ha. Clearly such a landscape organization represents considerable investment of time and energy, and considerable political power to instigate. Most important is the fact that this landscape organization post-dates the first expansion of settlement onto the moor since it overlies, and sometimes cuts through, earlier cairns and stone rows.

Settlements on Dartmoor are varied. In many areas single houses lie scattered among the fields, as at Holne Moor. Elsewhere enclosures predominate, as at Grimspound and Riders Rings, and at least some of these were probably herders' settlements. Excavations on Shaugh Moor illustrated the complexity of some of these sites by demonstrating that the enclosure wall was a late addition to an unenclosed group of houses first built around 1400 BC (83C).

Elsewhere in the south-west a broadly similar pattern of settlement can be detected. At Trevisker near St Eval, Cornwall, a small agricultural settlement comprised two timber roundhouses and ancillary buildings dated to 1510–1030 BC (NPL-134: 3060±95 BP). The subsistence base of this settlement was cereal agriculture and animal husbandry. No fieldsystem was identified at Trevisker but nearby on the fringes of Bodmin Moor at Stannon Down, Cornwall, stone roundhouses amid a fieldsystem were excavated in 1968. The fields here were of two types: strip fields presumably used as garden plots for growing cereals, and larger irregular enclosures probably used as stock corrals. Quernstones were found in the houses confirming the use of cereals but because no bone survived in the acid soil of the site it is impossible to say what animals were kept. At Gwithian, Cornwall, a settlement dating to about 1300 BC lay within a circular enclosure. To the south were eight fields, all clearly used for agriculture since traces of ard-marks and even spade-marks were found as outlines in the soft sandy subsoil.

Some sites may have specialized in certain activities and at Boden, Cornwall, excavations in 2003 revealed the remains of a very large Trevisker style pot that stood 92cm high with a capacity of 218 litres. It was a vessel that would have amazed and impressed people who saw it and was perhaps filled with rare or precious substances such as salt or beer. Very typical of the area is the lowland open farmstead found at Trethellan Farm near Newquay, Cornwall. Surrounded by fields, this settlement was built along a natural south-facing terrace. Seven circular structures were excavated, each with two or more phases of occupation. During the first phase, dated to around 1400 BC, there were two residential houses with three ancillary buildings and two open working hollows; during the second phase, dating to about 1300 BC, there were three residential houses, two ancillary buildings, and one open hollow. Both phases represent the remains of a

village of perhaps 20 to 25 people. All the houses were timber framed with a central hearth, and doorways opening to the south-east. The economy was based around barley, but wheat and oats were also found as well as Celtic beans and flax. Wild fruits were also used. Cattle, sheep/goats, and pig were kept. Stone tools and equipment including querns and grinders were appropriate for the settlement, as too a bronze bracelet, spearhead, and convex knife blade all within the Taunton industrial tradition (see below). Small-scale metalworking may have been taking place to judge from mould fragments. Beneath the hearth of one large house in period 2 at the eastern end of the village was the burial of a young adult male; other evidence of ritual and ceremony at the village includes a small square stone-built shrine on the north-east side and a series of hollows used for the deliberate placement of waste from the settlement. Two of the hollows contained cup-marked slabs.

Extensive fieldsystems have also been found in Penwith and on the Isles of Scilly where some of them have since been drowned by the sea. Coastal settlements abound in the south-west. At Nornour, Isles of Scilly, occupation started before about 1500 BC and a series of stone-built roundhouses probably represents several successive rebuildings of a long-lived but small settlement. The occupants relied upon cultivated cereals, and sheep, cattle and pigs kept on nearby pasture. Their diet was supplemented by fish and shellfish, and grey seals were hunted. Evidence of potting and stoneworking alongside the subsistence remains suggests that this small community was virtually self-sufficient.

## **Wessex**

On the chalklands of Wessex, from Dorset across to Sussex, and also on the surrounding heaths and vales, later second millennium BC settlement was especially dense. Both enclosed and unenclosed sites are found, many undergoing enclosure later in their life. At Shearplace Hill, Dorset, the nucleus of the settlement, loosely dated to 1870–920 BC (NPL-19: 3130±180 BP), lay within a small enclosure and comprised two structures, probably a house and a byre, together with a working area and a pond. Adjacent to the living area was a stock pen and a larger enclosure for cultivation. Further fields lay beyond and were linked to the settlement by a trackway. Cattle, sheep and pigs were kept. The main house was roughly circular, about 7m in diameter, and built with two concentric rings of postholes. A weaving comb from the site attests textile manufacture. By contrast, at a settlement on the west side of Poole Harbour at Bestwell, Dorset, six houses were found scattered among fields. Pottery was made from local clays at the site, and another broadly contemporary pottery production site was found during construction work at Sherborne, Dorset.

Several sites of this period have been investigated on Cranborne Chase. At South Lodge Camp, Dorset, a roughly square enclosure was constructed over an earlier unenclosed settlement within a fieldsystem. The internal organization of this enclosure is especially noteworthy. At least two circular post-built structures were found, the larger of which was a roundhouse some 5.5m in diameter. The southern half of the enclosure was largely given over to storage pits while in the

south-west corner was a midden. Near the main house was a burnt mound of a kind increasingly recognized in southern Britain (see below). Nearby, at Down Farm near Cranborne, Dorset, a settlement lay within an enclosure represented on three sides by a bank and ditch while the fourth was closed by a fence. Unusually, the main building was a timber-framed rectangular structure 4m wide and over 13m long superficially at least of continental design.

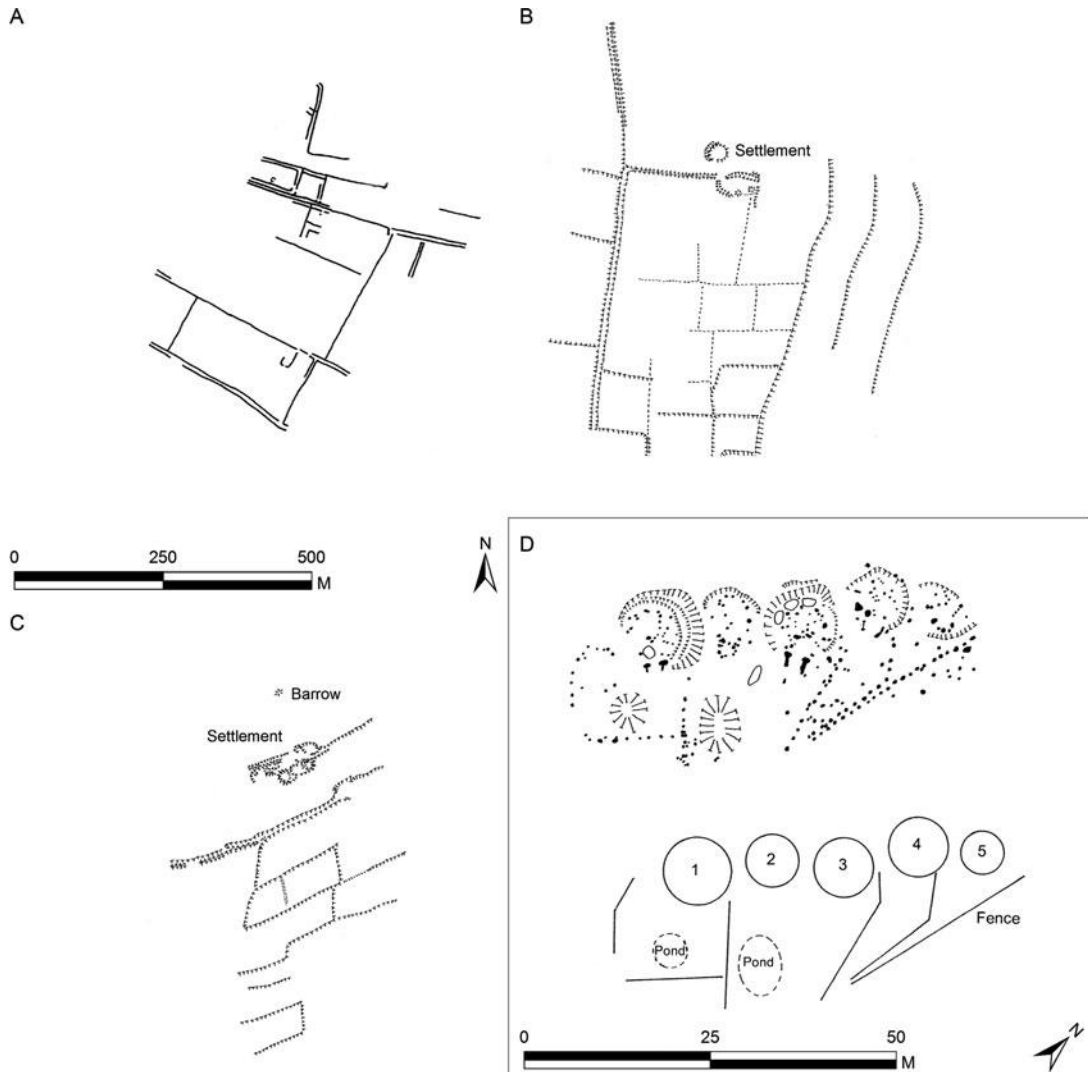
In Wiltshire settlements of this period include Rockley Down and Fyfield Down, both associated with extensive fieldsystems. Further east at Charlton, Hampshire, an unenclosed site dated to 1630–1310 BC (BM-583: 3193±69 BP) comprised one large roundhouse and an ancillary structure nearby. Grain storage is suggested by the presence of pits, and sufficient capacity existed to provide for a single family of perhaps four to six people.

Feldsystems, often called Celtic fields, have been recognized across Wessex, and many originate in the late second millennium BC. They comprise regular arrangements of small square or rectangular plots defined by low banks or lynchets. Most survive best on steep slopes where later agricultural activity has been minimal, but once they covered much wider areas. Two types can be defined. The first, usually termed cohesive systems, look as though they were planned and laid out in one operation, rather like the Dartmoor parallel reave systems. Large blocks of land were first defined as clear strips and then these blocks were subdivided into fields. Whether this subdivision was for mixed cropping or due to laws of inheritance is not known. The second type comprises aggregate systems in which fields were clearly added to one another on a piecemeal basis. Some individual fieldsystems cover 5 square kilometres or more.

In Sussex more than a dozen settlements of this period are known, of which Itford Hill, East Sussex, and Blackpatch, West Sussex, are the most fully investigated (84). At Blackpatch, excavations by Peter Drewett between 1977 and 1979 revealed four house-platforms distributed among an extensive fieldsystem along the side of a hill. Platform 4 was excavated in detail and was found to contain five houses dating to between 1490–1130 BC (HAR-3736: 3080±70 BP) and 1190–800 BC (HAR-2939: 2780±80 BP). The central structure was the largest and contained pits for storing barley. Analysis of the pottery and artefacts scattered around the platform allow it to be interpreted as the main house, and it stood within its own fenced enclosure. Two of the other buildings were also possibly houses, one of them probably the kitchen and the other a residence for dependants of the main family. The remaining two structures were probably given over to storage, or were animal shelters. The economy of the settlement was basically mixed farming, exploiting the surrounding downland and valley bottom. Cattle was the dominant species represented by the animal bones while barley was the main crop cultivated. Marine mollusca on the site attested occasional trips to the coast.

### ***Eastern England***

Across East Anglia, the Thames Valley, and the Midlands the number of sites known from this period has grown substantially as a result of commercial archaeology. On the north side of the



**Figure 84** Late second millennia BC settlements and fieldsystems in southern and eastern England. A: Fengate, Peterborough. Ground plan of ditches defining fields and enclosures as revealed by excavations; B: New Barn Down, West Sussex. A trackway flanked by small square fields and a settlement areas recorded as earthworks during fieldsurvey; C: Itford Hill, East Sussex. Small square fields and settlement areas known through excavation and fieldsurvey; D: Blackpatch, West Sussex. Settlement area comprising five buildings as revealed by excavation (upper) and as interpreted by the excavator on the basis of finds and structural remains (lower). 1: compound head's wife's house, also used for food preparation; 2: animal shelter; 3: compound head's house, also used for storage and crafts; 4: reliant relative's house; 5: animal shelter. [After Prior 1980, fig. 5; Bowen and Fowler (eds) 1978, figs. 9.1, and 9.2; Drewett 1979, fig. 1]



Thames Estuary at Mucking, Thurrock, an extensive fieldsystem was set out in the thirteenth and twelfth centuries BC with a settlement nearby. Much the same happened further east and David Yates has brought the evidence for the middle and upper Thames Valley together to show that a managed farming landscape emerged here soon after 1300 BC, and lasted down to about 800 BC. By the second half of this period the area was organized into four main regional blocks centred on Lechlade; Wallingford; Marshall's Hill; and Runnymede-Petters. Each was based around a high-status settlement and grounded in an essentially pastoral economy that supported an emerging social hierarchy.

A riverside occupation site, Aldermaston Wharf, West Berkshire, beside the River Kennet, yielded evidence for two roundhouses with adjacent clusters of pits, fences, and a pond associated with PPDR Wares. Spindle whorls and loom weights attest the manufacture of textiles, and there were also traces of metalworking on the site. Further east along the River Kennet excavations in the mid 1980s at Reading Business Park, Reading, revealed an extensive tract of well-preserved landscape dating to the later second millennium BC. Eight settlement foci at intervals of 0.5km to 1.5km apart in an area of 6 square kilometres were investigated. One fairly typical example included an extensive and regularly remodelled fieldsystem comprising large rectangular plots demarcated by ditched boundaries. The plots had been used for cereal cultivation and the management of cattle, and there were water-holes in some. The fields had been arranged with reference to a north-south boundary that structured the way the landscape was used. To the west was an earlier round barrow while cremation burials were placed beside the boundary ditch, perhaps to strengthen the sense of communal identity. To the east a trackway flanked by over 150 pits gave access to the main settlement area which included 12 roundhouses, 11 four-post and two-post storage structures, 8 water-holes, numerous postholes, and a burnt mound over 85m long.

A similar density of occupation was revealed during the construction of new car parks at Stanstead Airport, Essex, the largest settlement being set within a rectangular hedged enclosure at the heart of which was a standing stone and a substantial roundhouse. Occupation associated with a fieldsystem at South Hornchurch, Essex, included two roundhouses within circular ditched enclosures. At Loft's Farm, Essex, a double-ditched sub-rectangular enclosure 42m by 48m contained a central roundhouse opposite the entrance with a rectangular structure in one corner. It lay within an open landscape of damp grassland and its occupants were engaged in an essentially pastoral economy.

Further north at Barleycroft Farm, Cambridgeshire, excavations by the Cambridge Archaeological Unit in advance of gravel extraction revealed part of a coaxial fieldsystem probably set out in the mid second millennium BC. Lacking any droveways, it might well have been mainly used for crops rather than animals. An aisled longhouse set within a three-sided enclosure was added to the settlement around 1100 BC and matches closely the example at Down Farm, Dorset, referred to above. Generally, enclosed settlements in this region are rare, but at Billingborough, Lincolnshire, a small square enclosure, somewhat similar to the example at Loft's Farm, Essex, was the focus of a farm. Recent ploughing had removed much of the

evidence for structures, but sufficient survived to show that circular buildings had once been present.

At Fengate, Peterborough, the relatively small-scale fieldsystems of the early second millennium BC were extended from the higher dry land down into the seasonal grazing provided around the fen-edge. Drove ways were established at intervals of about 100m on a roughly north-west to south-east axis, often orientated on existing barrows which seem to have formed an element of continuity in a fast-changing world. At the centre of the system was a series of what Frances Pryor interprets as community stockyards. These allowed the sorting and handling of livestock, mainly sheep, that after grazing the rich pastures of the Fens would be driven to high ground in the autumn to be sorted, exchanged, and culled. Occupation within and around this system was dispersed, usually with farmsteads comprising a house and one or two ancillary buildings.

Burnt mounds are found in association with many settlements of the later second millennium BC in this region and elsewhere, usually near the main residential area. They typically comprise elongated, oval, or crescent-shaped heaps of burnt stones with a trough or stone-lined pit near the centre. Most are situated beside streams or near water. Traditionally interpreted as cooking sites at which heated rocks were placed in the central trough to heat water, other interpretations have been offered. Mike Hodder and Laurence Barfield, for example, suggest that some were saunas or some kind of sweathouse the use of which might have involved narcotic substances. Once considered to be a predominantly upland phenomenon, burnt mounds have been recognized across most parts of Britain – over 100 in the Birmingham area alone – and they probably reflect a widespread underlying element of the settlement pattern of later second millennium BC communities.

### ***Wales and the west of England***

Little is known of settlement patterns during the late second and early first millennium BC in Wales and the Welsh Marches, despite the fact that numerous burials and stray finds of bronze tools and weapons have come to light. Excavations by the Dyfed Archaeological Trust on Stackpole Warren, Pembrokeshire, revealed an enclosed settlement loosely dated to 1110–800 BC (CAR-845: 2770±60 BP). Other settlements in west Wales include Sarn Meyllteyrn, Gwynedd, with traces of three roundhouses, and Glanfeinion near Llandisnam, Powys, where a roundhouse 9m across was associated with local styles of DR Ware. Several sites have been identified along the shores of the Severn Estuary as a result of surveys and excavations by Martin Bell. Most important is a group of three rectangular buildings at Redwick, Newport, some of the timbers of which were preserved in the waterlogged conditions. One structure was 11.5m by 4.5m and dated to 1490–1120 BC (SWAN-227: 3060±70 BP). Broadly contemporary roundhouses have been found at Chapel Tump and Romney Great Wharf, Monmouthshire.

Burnt mounds are numerous in south-west Wales suggesting a far more intensive occupation than is visible from settlements alone. During the construction of a gas pipeline across

south Wales in 2006 investigations by Cotswold Archaeology revealed more than 20 burnt mounds in east Pembrokeshire and west Carmarthenshire. One at Upper Neston Farm, Pembrokeshire, preserved a large oak trough 4.2m long dated to 1610–1320 BC (Beta-218656: 3180±50 BP).

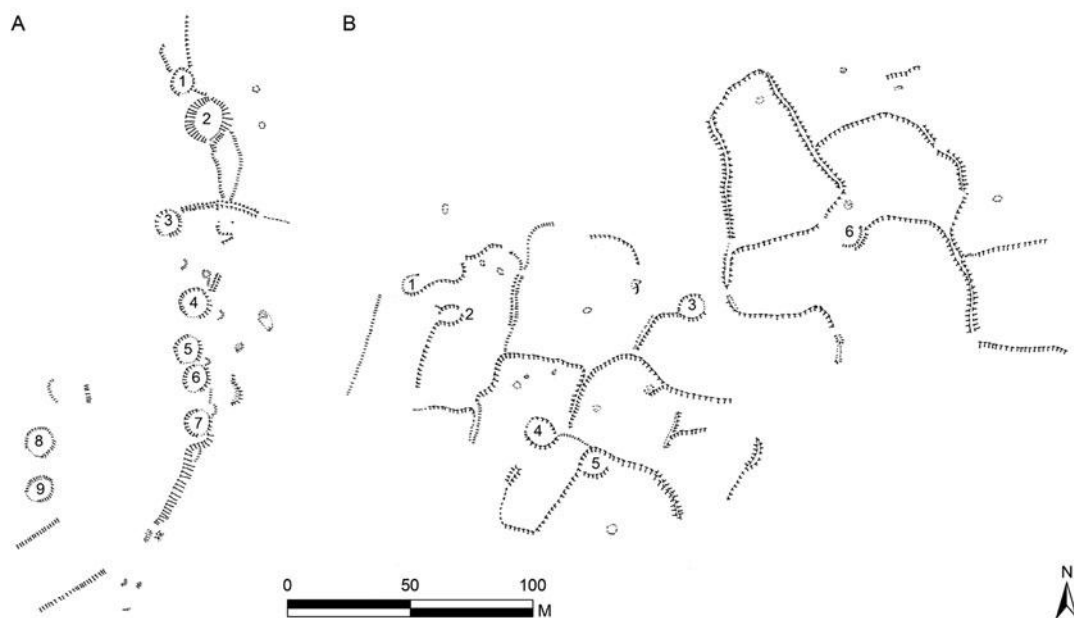
East of the River Severn, occupation of middle and late second millennium BC date has been found on the Avon Levels at Cabot Park, South Gloucestershire, and further north at Frocester, Gloucestershire, where the focus of activity appears to have been a gravel ridge with a burnt mound beside a small stream to the east.

In the eastern Cotswolds and upper Thames Valley occupation between 1500 BC and 800 BC was dense. At Roughground Farm, Gloucestershire, three parallel linear boundaries up to 300m long and spaced at intervals of between 300m and 50m appear on a consistent south-west–north-east orientation. Pits, a four-post structure, and a single roundhouse with a porched entrance opening to the south-east lay midway between two widely set boundaries. Angular tripartite jars and bowls are well represented in the DPDR assemblage from these features; among the modest animal bone assemblage sheep were dominant (52 per cent), followed by cattle (31 per cent) and pig (12 per cent).

Further upstream on the Thames-Coln interfluvium extensive excavations around Shorncote have revealed three main areas of occupation associated with PPDR pottery, although whether they were occupied contemporaneously or result from the gradual drift northwards of a single focus of activity over several generations is not yet clear. The southern settlement comprised at least six roundhouses with pits, wells, and water-holes round about. Plant remains from one well show that it was fully shaded by trees and shrubs, but there were few indicators of cultivated plants. Carbonized plant remains from elsewhere on the site were also sparse, but included small amounts of wheat and barley. The small assemblage of animal bone indicated the presence of cattle and sheep/goats. Fragments of circular clay loom weights provide evidence for textile production in the vicinity. The second and third settlements lie north of the first, and comprised an extensive spread of 34 mainly post-built circular structures. Unlike at the settlement to the south, there were no water-holes or wells.

### ***Northern England and Scotland***

In the north of England and southern Scotland upland patterns akin to those already noted from Dartmoor prevail, although large formal fieldsystems are rare. Arable cultivation is attested by the numerous clearance cairns characteristic of many northern upland areas. One of the largest extant examples is on Danby Rigg, North Yorkshire, where more than 850 small piles of stone suggest extensive clearance. In the border counties, settlements often comprise platforms supporting substantial roundhouses arranged around the contour of the hillslope (85). Aerial photography by Tim Gates and others has revealed over 100 of these unenclosed settlements in Northumberland, and although only eight have been excavated most seem to be of late second



**Figure 85** Late second and early first millennium BC settlements in northern England and southern Scotland. A: Green Knowe, Scottish Borders. Houses numbers 1–9 running along the contour of the hill slope. B: Standrop Rigg, Northumberland. Houses, numbered 1–6, amid fields/paddocks. [After Jobey 1980, fig. 2; 1983, fig. 2]

millennium BC date. Among those investigated is Standrup Rigg, Northumberland, which lies at 380m above sea level in the Cheviots. Here five or six round stone houses were built within a fieldsystem of 2.75ha or more. Further north at Lintshie Gutter near Crawford, South Lanarkshire, a total of 32 house-platforms run along a north-facing hillslope allowing cultivation of the lower ground below the settlement and grazing for animals on the slopes above.

Enclosed settlements are also known, as at Bracken Rigg, Northumberland, while scattered across the uplands are numerous agricultural features of this date such as lengths of dyke and the L-shaped and C-shaped walled enclosures forming windbreaks for animals grazing the exposed northern hills. At Culbin Sands, Moray, a coastal settlement broadly similar to those in south-western Britain dates from about 1670–1320 BC (Q-990:  $3209 \pm 75$  BP), while at Kaimes Hill, Edinburgh, occupation dated to 1380–1000 BC was found adjacent to a place that had previously been used as a burial ground.

On the Isle of Man, a hamlet comprising a dwelling and four or five ancillary buildings arranged around a cobbled yard with a small circular shrine to the north has been excavated at Billown Quarry, and a rather larger settlement is known near the coast at Ronaldsway Airport.

In Orkney and Shetland occupation sites of the later second millennium BC are scarce, but more than 200 burnt mounds are known in each island group (86). Excavations at Liddle and Beaquoy, Orkney Islands, by John Hedges revealed that here at least the burnt mounds



**Figure 86** Burnt mound at Liddle Farm, Orkney Islands, under excavation. The trough and stone cooking area lies in the centre of the picture with the stony mound sectioned in the background top right. Scales each total 2m. [Photograph courtesy of John Hedges. Copyright reserved]

resembled houses and that the two functions might be combined. Ard shares and quernstones indicate cereal cultivation while sheep/goat bones show the nature of local husbandry. Seal, whale, and red deer bones show terrestrial and marine hunting. The most northerly known settlement of this period is at Jarlshof, Shetland Islands. Here, solidly built oval houses represent a succession of rebuildings by a small community. Each house had a central hearth with two partitioned cubicles and a larger oval chamber at the inner end. The occupants were primarily pastoralists, and some of their cattle were stalled inside one of the houses. Shellfish were also collected from the nearby shore. A mould from the site for making Ewart Park-type swords shows that crafts on quite a scale were practised here.

## **BURIAL RITES AND COMMUNAL RITUAL**

After 1500 BC the construction of round barrows became less popular, their place being taken by cremation cemeteries or urnfields. Grave goods also became less common, and rich burials

almost disappear. Interest in earlier megalithic monuments waned too, and many ceremonial structures that happened to lie within areas taken into intensive cultivation were either ignored or slighted.

Many cremation cemeteries of the later second millennium BC lie partly over or adjacent to existing round barrows, perhaps because of the recognized sanctity of a site or perhaps because of lack of space in the landscape to put it anywhere else. At Trelystan, Powys, a layer of turf was superimposed on the original cairn, rings of stakes were hammered in, and at least five new burials were added sometime about 1600 BC. Similar additions were made to the Sutton 268 Barrow, Vale of Glamorgan. Among the most spectacular must be the Knighton Heath Barrow, Poole, where no fewer than 60 cremations, mostly in urns, were placed in the upper levels of an earlier barrow between 1520–1310 BC (BM-870: 3155±49 BP) and 1420–1210 BC (BM-874: 3052±40 BP). Men, women, and children were represented. Further west, at South Lodge Camp, Dorset, a cemetery of over 20 burials clustered around and cut into earlier barrows within 200m of the enclosure. Richard Bradley has recognized similar patterns at sites across southern Britain, suggesting that settlements and cemeteries were closely connected and typically located within a few hundred metres of each other.

Burials deposited in these flat cremation cemeteries were usually fairly well burnt and the ashes contained in large coarse pots, basically domestic vessels used for burial purposes. Some cemeteries in southern Britain were very large indeed. At Kimpton, Hampshire, a cemetery dating to between 1640–1310 BC (HAR-4319: 3200±70 BP) and 1490–900 BC (HAR-4317: 2970±100 BP) contained 158 urns and 164 cremations. Within the spread of graves were five distinct clusters, perhaps family groups or the result of progressive growth over time. Fifteen clusters of burials were recovered at Simons Ground near Hampreston, Dorset, where the urnfield as a whole contained over 300 burials variously clustered round the southern half of several earlier barrows. At Brightlingsea, Essex, a cemetery of 31 ring-ditches was the setting for a cemetery of 46 cremations, around 75 per cent of which were in Ardleigh Urns.

In the north and west of Britain large urnfields are absent, although small examples are widespread perhaps reflecting lower population density, small group size, and the fact that traditions of reusing barrow burials continued longer. At Bromfield, Shropshire, 14 graves were found in a single cluster dating to around 1190–800 BC (Birm-63: 2800±71 BP), while further north-westwards at Four Crosses near Llandysillio, Powys, a handful of secondary burials in Bucket Urns were dug into two earlier barrows in this small cemetery. Similar cemeteries are also found in the north of England and Scotland. The one at Catfoss, East Riding of Yorkshire, lay within a penannular ring-ditch.

In the west of Britain cremations around standing stones are not uncommon, the stone becoming a marker for a small cemetery. At Stackpole Warren, Pembrokeshire, a standing stone surrounded by a trapezoidal setting of over 3,000 smaller stones (74B) was erected sometime after 1870–1460 BC (CAR-100: 3345±65 BP) and a pit dug near the standing stone contained a cremation dated to 1302–902 BC (CAR-101: 2890±70 BP).

Investigations at Cladh Hallan on South Uist, Western Isles, have raised the possibility that some bodies were mummified thereby securing a place in the afterworld while also being allowed to watch

over the world of the living. In this case, two adults and two children were used as foundation deposits for a series of conjoined roundhouses around 1150 BC; their slightly earlier date, the chemistry of their remains, and the fact that they had been tightly bound and in some cases rearranged prior to burial suggests that they have been curated as ancestors for decades if not centuries.

## RIVERS, LAKES, BOGS AND THE LURE OF WET PLACES

While many traditional burial practices start to disappear after about 1200 BC, interest in rivers, lakes, and bogs seems to increase in a way that led Colin Burgess to suggest the appearance of a new water cult in Britain around the turn of the first millennium BC. Although springs and rivers had been significant in the beliefs of earlier societies, from about 1100 BC onwards high-quality metalwork was regularly deposited in wet places. Weapons predominate, as they did in graves during the preceding millennium, and it seems likely that they relate to river burials and votive deposits. The Thames and Witham are particularly rich in such finds, but lakes and mires in western Britain yield large quantities too. One typical example is the Broadward collection found during the drainage of a mire near Clun, Shropshire, in 1867. Many spearheads and other weapons were carried off at the time, but 70 or so items are still extant in the British Museum.

Ceremony and ritual was clearly very important in all this. At Luggtonridge Farm near Beith, North Argyll, five or six round bronze shields were apparently found set in a regular ring within a bog. More extensive is the evidence from Flag Fen, Peterborough, where rows of wooden posts and raised trackways led from the fieldsystems out into the wetland, with a deliberately constructed timber island supporting a rectangular structure or shrine in the middle (87). Dendrochronology shows that the first post alignments were constructed between 1301 BC and 1257 BC and that the timber platform was built in the second half of the tenth century BC. About 150 bronze tools and weapons were deposited in Flag Fen, including swords, rapiers, rivets, pommels, chapes, ferrules, spearheads, daggers, knives, gouges, flesh hooks, axes, razors, awls, studs, buttons, beads, and bracelets, as well as composite objects such as shields and helmets of which only the metal elements survive. A similar structure has been found at Eastbourne, East Sussex, where the finds again include bronze tools and weapons, some imported from the Continent, as well as shale and amber beads and human remains. Other timber trackways excavated in wetland areas probably served a similar purpose.

Shafts and wells may have been special places. At Swalecliffe, Kent, 17 wells with steps and wooden revetments dated by dendrochronology to the period 1432–1085 BC, while the Wilsford Shaft, Wiltshire, remained in use until about 1600–1260 BC (OxA-1217: 3150±60 BP) when soil and rock began to form a solid fill that precluded further access.

Interest in wet places undoubtedly connects with changing cosmological views and understandings of the world that developed ideas already circulating in the early second millennium BC. They are hard to glimpse from archaeological evidence alone, but seem to revolve around a set of mythologies related to three cosmological levels: the earth, the sky, and the underworld.



**Figure 87** Timber platform dated 1300–900 BC at Flag Fen, Peterborough. The platform originally lay within a shallow lake or marsh and may have been used as a base for the deposition of metalwork and other objects in the wetland. [Photograph courtesy of Frances Pryor (Fenland Archaeological Trust). Copyright reserved]

Uniting them is the sun, and in particular its journey across the sky during the day and through a watery underworld during the night. Kristian Kristiansen and Thomas Larsson have traced this to a series of pan-European beliefs that they suggest were widely transmitted through travel and pilgrimage during the second millennium BC. In this an elite linked themselves to the gods that were seen as the creators of the universe through the control of objects, animals, and the dead; this in turn allowed them to rule the living population. A central theme of these beliefs is a paired



deity, later represented as the Divine Twins, which probably refers to a combination of male and female forces (perhaps developing the hermaphroditic and sexually ambiguous representations of earlier deities) which find expression as paired objects in structured deposits. Thus many hoards of metalwork include two identical or very similar objects. The twins also play a role in the story of the sun's daily cycle that Flemming Kaul has pieced together for northern Europe using iconography embedded in the motifs found on razors dating to the period 1100–700 BC in Denmark (Table H). Whether similar myths and stories circulated in Britain at the same time is more problematic, and hinges on the nature and intensity of continental contacts.

## FOREIGN CONNECTIONS

Throughout the later second and early first millennium BC Britain was closely linked to the Continent and to Ireland, although the intensity of contact changed over time. The period 1400–1300 BC, coinciding with the Taunton industries of southern Britain, is sometimes referred to as the 'Ornament Horizon' because of the volume of personal adornments produced at this time, the inspiration for which lay directly across the channel in northern France. Some may indeed be direct imports. Ben Roberts has shown that the majority of these ornaments were designed to adorn the neck, wrist, and fingers, only a selection of pins being used as clothes fasteners. In southern Britain a series of five regional concentrations were identified each with preferred styles of ornament – south-west peninsula (gold armrings); Dorset and Somerset (gold and bronze spiral twisted torcs, arm-rings, and finger-rings); Hampshire and Sussex (bronze annular arm-rings and 'Sussex-loop' bracelets); Kent and the Thames Valley (bronze pins); and East Anglia (gold and bronze spiral twisted torcs and bronze quoit-headed pins) – with light scatter of items to the west and north of these areas perhaps reflecting marriage partnerships.

Particularly close ties between southern England and the Low Countries emerged between 1300 BC and 1100 BC. Metalwork in the two areas is very similar, suggesting considerable sharing of ideas, and objects too. A farmer living at Horridge Common in the heart of Dartmoor, Devon, around 1250 BC, for example, acquired a bronze palstave probably manufactured in Bohemia, but he appears to have lost it out in his fields sometime later. Pottery too shows similarities. Trevisker Ware made in Cornwall has been found in Kent and across the Channel at Hardelot (Pas de Calais) and on the Ile Tatihou (Manche), France, discoveries that serve to underline the scale of cross-channel links. And similarities go deeper than the pottery and the metalwork. The rectangular aisled halls at Barleycroft Farm, Cambridgeshire, Down Farm, Dorset, and Redwick, Newport, find their best parallels with contemporary structures at Deventer (Overijssel) and Hoogkarspel (Noord Holland) in the Netherlands. Movement in the other direction is represented by a number of finds, among them a hoard found at Voorhout (Zuid Holland), Netherlands, containing 19 palstaves made in metal from North Wales.

**Table H.** Provisional cosmological schemes for the daily cycle of the sun based on archaeological material dating to the second millennium BC from north-west Europe. [Sources: Kaul in Clark (ed) 2004, 131; Kristiansen and Larsson 2005, 306–7]

| Cosmological stage | Mythical events                                                                                                                            |                                                                                                                                     |                                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | Version 1                                                                                                                                  | Version 2<br>(1700–1300 BC)                                                                                                         | Version 3<br>(1300–700 BC)                                                                                                                       |
| Sunrise            | The fish pulls the rising sun up from the night-ship to the morning-ship.                                                                  | The Divine Twins rise in the morning, rescue the sun from the night-ship and transfer it to a horse-drawn chariot.                  | The Divine Twins rise in the morning, rescue the sun from the night-ship and transfer it to a chariot drawn by swans.                            |
| Early morning      | For a while the fish is allowed to sail on with the morning-ship as it starts its journey across the sky.                                  |                                                                                                                                     |                                                                                                                                                  |
| Mid morning        | The fish is to be devoured by a bird of prey while two sun-horses pick up the task of carrying the sun across the sky aboard a chariot.    |                                                                                                                                     |                                                                                                                                                  |
| Late morning       | The two sun-horses prepare to take the sun from the morning-ship.                                                                          | The Divine Twins, each armed with a ceremonial axe, accompany the sun on its journey across the sky aboard the horse-drawn chariot. | The Divine Twins, each armed with a ceremonial axe, accompany the sun on its journey across the sky aboard the chariot drawn by swans.           |
| Noon               | The sun-horses carry the sun on its onward journey across the sky aboard a chariot.                                                        |                                                                                                                                     |                                                                                                                                                  |
| Early afternoon    | The sun-horses and chariot land on the sun-ship.                                                                                           |                                                                                                                                     |                                                                                                                                                  |
| Mid afternoon      | The sun is taken over by the snake who protects it on the sun-ship.                                                                        |                                                                                                                                     |                                                                                                                                                  |
| Late afternoon     | The snake conceals the sun in its spiral curls so that it can lead the sun down below the horizon.                                         |                                                                                                                                     |                                                                                                                                                  |
| Sunset             | Two night-ships arrive to carry the sun into the underworld. The sun is no longer visible as it starts its journey through the underworld. | The sun is captured by a Sun-God/ Priestess and transferred to the night-ship (represented as a razor) of the Twin Ruler.           | The sun is captured by a Sun-God/ Priestess holding a drinking cup and transferred to the night-ship (represented as a razor) of the Twin Ruler. |
| Midnight           | The fish swims with the nightships in order to accompany the sun to the eastern horizon in readiness for sunrise.                          | The night-ship carries the sun across the waters of the underworld during the night.                                                | The night-ship carries the sun across the waters of the underworld during the night.                                                             |

Political and social unrest in southern Europe can also be detected in Britain through fluctuations in the patterns of foreign exchange. In the thirteenth century BC the Mediterranean world was thrown into chaos by mercenaries (known collectively as the Sea People or the Philistines of biblical account) employed by Mycenaean princes, some of whom probably came from northern and central Europe. Whether anyone from Britain was involved is not clear, although adventures on such raids would provide a convenient context for the arrival in Britain of Mycenaean and Cypriot metalwork broadly datable to the period 1300–1200 BC. Sadly, none of the pieces known to date have been found in secure archaeological deposits which makes evaluation very difficult. What is clear, however, is that the experiences gained by European armourers supplying weapons to mercenaries fighting in the Mediterranean promoted the introduction of new weapon types such as swords and shields to Britain during the Penard period. With the emergence of warrior aristocracies in Europe, Britain was kept well supplied with new ideas for weapons and military equipment.

Boats were physically important as well as cosmologically significant in connecting areas of the British Isles together, and linking Britain to the Continent. A handful of examples dating to the middle and late second millennium BC are now known, some of them substantial vessels. One, a plank-built example found at Dover, Kent, in 1992, dates to 1575–1520 BC and is a seagoing vessel 2.25m wide and at least 14m long, capable of working along the coast and perhaps crossing the Channel, paddled by a crew sitting on the gunwale. Two or three wrecks of seagoing boats are known from their cargoes on the floor of the Channel. The earliest probably dates to about 1100 BC and lies in Langdon Bay just off Dover, Kent. The cargo, which has been recovered by divers, includes over 95 bronze objects, many broken and all seemingly of continental origin. Daggers, dirks, rapiers, and palstaves were among the objects found. The second site is at Salcombe, Devon, and may be the remains of two vessels (88). At Moor Sands divers recovered seven objects: two palstaves, four blades, and a sword in 1977–83. In 2004, work about 500m west of the first find revealed a second cluster of material also dating to the period 1300–1150 BC: 28 items have been recovered so far, including two rapiers, nine sword or rapier pieces, four palstaves, an adze, three spearheads, a hammer, part of a twisted gold torc, a gold armlet, the ring-handle from a cauldron, two blocks of bronze, and a kind of bladed tool known as a *strumento* that probably originated in Scilly in the central Mediterranean.

A second period of intensive European contact in the eleventh and tenth centuries BC brought ideas to the Thames Valley and south-eastern England that led to the development of local PPDR ceramic forms and knowledge of ironworking. Further influences during the tenth and ninth centuries BC, again across the southern North Sea between the Thames Valley and the Rhine Valley, prompted the adoption of angular bowls, furrowed bowls, and haematite coated pots forming the core novel components of Britain's DPDR repertoire. Michael Avery and John Barrett have independently shown how these styles of vessel can be paralleled in late urnfield/early Hallstatt contexts on the Continent, pots which were themselves imitations of metal prototypes mimicking vessels common in the Mediterranean world. A hoard of metalwork found at Welby, Leicestershire, contains parts of a cross-handled bowl and a complete



A



B

**Figure 88** Shipwreck at Moor Sand off the coast at Salcombe, Devon. A: Divers excavating part of the cargo; B: Bronze Rixheim/Monza series tanged sword blade dating to c.1300–1100 BC and an eroded bronze blade from a second sword of unknown type. [Photographs by Keith Muckelroy courtesy of Dave Parham (Bournemouth University) and the National Maritime Museum]

furrowed bowl, both in bronze, that were manufactured in central Europe and later imported into Britain.

Exchange of metalwork between Britain and the Continent can also be clearly seen in the adoption and development of swords. The earliest swords in Britain are of the Rixheim type, connecting with the Penard industries of the thirteenth century BC, followed by the Erbenheim and Hemigkofen series swords that within the same tradition were copied in Britain as the Lambeth, Chelsea, and Ballintober series respectively. These last-mentioned types had leaf-shaped blades, starting a tradition continued by Wilburton-Wallington smiths and their successors responsible for the Ewart Park industries that culminated in superbly crafted weapons especially suitable for use by warriors on horseback.

## CRAFTS, INDUSTRY, AND EXCHANGE

As the swords show, the most visible impact of foreign connections at this time was the effect on the manufacture of goods at all levels. Domestic crafts provided the main items for everyday use, and many settlements were seemingly fairly self-sufficient to judge from the waste materials and workshops found during excavations. Pottery, for example, was generally made from local clays even though regional styles betray wider community affinities. Flint tools declined in importance and competence, and traditional stone tools found less use as metal tools became widespread. This

change is nowhere more graphically illustrated than at Grimes Graves, Norfolk, where a metalworker set up a workshop in the twelfth century BC amid the hollows of the previously prosperous flint mines.

### ***Bronze, gold, and iron***

The development of the metalwork industry has been charted by Colin Burgess and Stuart Needham who defined five Metalworking Stages or industries between about 1500 and 800 BC, each conveniently named after a typical assemblage. In chronological order, for southern Britain, these are the Acton Park, Taunton, Penard, Wallington-Wilburton, and Ewart Park industries, each with regional variants across other parts of Britain (Table G). Mike Rowlands has suggested that during the three earliest of these stages metalworking took place at two distinct levels. Local industries geared up to making small items such as tools and small spearheads, and ornaments were widespread. From visible similarities between individual products and occasional evidence for use of the same mould it seems that each smith was working to produce bronzes for communities within a radius of 15 to 20km. Whether there were fixed local workshops, or whether the smith moved round to settlements within this area, is not clear. However, hoards of finished and part-finished tools suggest that at least in the south smiths worked seasonally and cast a sufficient number of items to provide a stock for subsequent use and distribution. A glimpse of one smith's workshop may be gained from a site at Galmisdale on Eigg, Highland, where the manufacture of early socketed axes and knives took place in the shelter of a large earthfast boulder seemingly well away from the nearest settlement.

At an altogether different level, regional industries can be recognized from similarities in product design and casting technique used over wide areas. These items are exclusively weapons: rapiers, large spearheads and, later, swords. Such items are rarely found in hoards alongside the more prosaic pieces, and they generally display more complex casting technology. The Thames Valley emerged as one of the major production centres, with others in East Anglia and south-west England.

Metal ores continued to be extracted from mines in central Wales, North Wales, and Alderley Edge, Cheshire, through the later second millennium BC, although the volume of metal produced had by this time been surpassed by workings in central Europe and southern Spain. Bun-shaped copper ingots represent the form in which raw metal was transported to smiths across Britain, but to what extent bronze objects were recycled at this time is unknown.

From about 1100 BC (the Wilburton-Wallington industrial phase) metalworking underwent a period of change that gathered pace in the late eleventh century BC. Lead bronze, which although softer allows more complex castings to be made, became common first in the south and then throughout Britain. The two-tier system of production broke down, and all types of object were made locally, although the Thames Valley remained in the vanguard of developments because of its close ties with the Continent. Smiths obviously kept well abreast of changes in techniques and

styles and it seems likely that they emerged as full-time specialists, possibly with patronage from a chief or leader.

Obtaining three types of raw material – copper, tin, and lead – to make new castings implies a complicated distribution network, and it is perhaps a reflection of this complexity that hoards of scrap metal, sometimes associated with metalworkers' tools and moulds, become very common at this time. Sophisticated two- and three-piece moulds were developed and sheet metalworking was more widely practised, again through continental inspiration, to produce buckets, cauldrons, and shields which seem to have been added to the range of prestige items produced by the late eleventh century BC if not earlier. Other new types characteristic of the Wilburton-Wallington industries included constantly changing weapon designs, socketed sickles, knives, new razors, and horse harness fittings. It was also at this time that metal objects, particularly the larger and more complex items, were being deposited in considerable quantities as votive hoards in rivers, lakes, and bogs. This conspicuous consumption of wealth with no provision for retrieval created a continuous and ravenous demand for new goods and probably promoted innovation and experiment.

Whether because of difficulties in obtaining supplies of bronze, or for some other reason such as an increased demand for metal goods, British smiths began using iron from about 1000 BC, albeit on a small scale alongside Wilburton-Wallington and the subsequent Ewart Park industries. The earliest recorded case of ironworking in Britain was found during an excavation by Cotswold Archaeology at the site of Hartshill Copse near Bucklebury, West Berkshire, in 2003 (89). Careful analysis of soil samples from a settlement site revealed quantities of distinctive hammer-scale from the smelting and forging of iron in one of the two roundhouses and covered work areas, both associated with PPDR Ware and a series of radiocarbon dates that centre on the tenth century BC. Curiously, occupation at the site is small-scale with just a single family living in a roundhouse with a workshop, covered work-space, and a small enclosure for livestock. They perhaps lived apart from the rest of the community because of the magical nature of their work, extracting swords from stone to use a motif found in more recent folklore. It is a view supported by the fact that two intersecting post rows structure the use of space at the site and create an axis of symmetry that bisects the main dwelling house and the roundhouse being used for metalworking, creating a line of vision that projects towards the horizon both east and west.

Iron ore was much more widely available than copper, tin, and lead, and would have involved fewer well-coordinated exchanges to obtain supplies. The techniques of roasting and smelting were, however, much more difficult than for the softer non-ferrous metals and required higher temperatures. At first iron objects were direct copies of bronze ones, sickles, axes, edged tools, and weapons being the most common. All early ironwork was forged and early products were hardly of better quality than their bronze counterparts, although iron would have provided a more long-lasting cutting edge.

Goldworking continued for the manufacture of ornaments such as bracelets, torcs, and sleeve fasteners. The discovery of a small portable bronze anvil used in goldworking at Knowle Farm



**Figure 89** Hartshill Copse, Upper Bucklebury, West Berkshire. Reconstruction drawing of the settlement at about 1000 BC with a dwelling house in the foreground, ironworking in the open shelter and roundhouse beyond, animal pen, and timber rows intersecting on the primary axis of the settlement and extending into the landscape beyond. [Drawing by Steve Smith reproduced courtesy of West Berkshire Council and Cotswold Archaeology. Copyright reserved]

near Lichfield, Staffordshire, in 1990 suggests that goldsmiths were peripatetic. On the south coast Kimmeridge shale was worked into bracelets and other ornaments at Eldon's Seat, Dorset, among other places, and cannel coal was worked at Swine Sty, Derbyshire. One of the most splendid items manufactured in shale in the late second millennium BC is the Caergwle bowl found near Caergwle Castle, Flintshire, in 1823. The object is boat-shaped and is generally regarded as being a votive boat, perhaps the sun-boat of north European mythology, the decoration representing shields, oars, waves, and the ribs of the boat itself.

### ***Woodworking and textiles***

Woodworking was widespread and important although poorly represented archaeologically. Waterlogged deposits in a recut shaft or well sunk 33m into solid chalk at Wilsford in the middle of Salisbury Plain, Wiltshire, yielded a wooden bowl and fragments of a bucket dated to 1877–1432 BC (NPL-74: 3330±90 BP), and provide tantalizing glimpses of the sorts of object which must have been commonplace. Wooden boats have already been mentioned, and trackways are known from this period in the Somerset Levels and at more than half a dozen sites in the Thames Valley in east London. Perhaps most impressive of all, however, is the timber platform at Flag Fen, Peterborough, preserved in the silts and peat of the East Anglian Fens.

Textile production is attested from the later second millennium BC onwards by loom weights, spindle whorls, and weaving combs from sites across southern England. After 1000 BC such finds are also known from northern Britain.

### ***Salt production***

Salt was produced at coastal salterns in some quantity from the middle of the second millennium BC. Much of the evidence comes from the east and south coasts of England where sea-water was first evaporated off in large open salt pans and then the remaining concentrated brine reduced by boiling. It is this second phase of saltmaking which leaves abundant archaeological evidence. Coarse ceramic vessels, made in a crude fabric called briquetage, were used in the boiling process together with various ceramic stands and supports. It is likely that saltmaking was seasonal, only practised during the summer when temperatures permitted natural evaporation.

At Brean Down, Somerset, salt production between 1800 BC and 800 BC used the high-salinity waters of the Bristol Channel. On the other side of the country early workings have been recognized at Walton-on-the-Naze and at Fenn Creek in Essex, and Billingborough, Lincolnshire, where production may have started as early as the ninth century BC, and at Tetney, Lincolnshire, where an evaporation pool 16m across dates to 975–545 BC (RCD-1305: 2640±70 BP). Saltmaking equipment has been found in abundance at the South Rings at Mucking, Thurrock,



on the Thames Estuary dated to the tenth century BC (90), and also in the part-filled ditches of the fieldsystem at Fengate, Peterborough, seemingly abandoned in the ninth century BC. It is possible that the brine springs at Droitwich, Worcestershire, among the purest in Europe, were also exploited from this time.

Exactly why there should be an interest in large-scale salt production is not at present clear. However, it is tempting to associate it with the need to preserve meat and fish during transportation, and with a increased emphasis on stock husbandry with consequent demands for salt as a dietary supplement for cattle.

## LOCAL AND REGIONAL EXCHANGE PRACTICES

Exactly how goods such as fine pottery, querns, and metalwork moved about between communities in different regions is unclear. Some hoards of bronzeworking equipment, scrap, and part-finished products suggest itinerant smiths but, as in earlier times, communal meeting places may have been the context for local and regional exchange. Across central southern England a number of possible meeting sites have so far been identified, all of them fairly large earthwork enclosures dating from the mid thirteenth century BC down to the mid ninth century BC. Three main types can be identified on the basis of their ground plan, each with a regional distribution (91). Across central southern England are the Rams Hill-type enclosures, named after Rams Hill, Oxfordshire, but also represented by sites at Norton Fitzwarren, Somerset; Highdown Hill, West Sussex; Chisenbury, Wiltshire; Hog Cliff Hill, Dorset; and Martin Down, Hampshire. Other



**Figure 90** Clay vessels and equipment used in salt production at Mucking, Thurrock, in the early first millennium BC. The circular object bottom right measures 65mm in diameter. [Photograph courtesy of W T Jones APRS FSA. Copyright reserved]

examples undoubtedly await discovery (92A & B). Only Rams Hill has been extensively excavated, and here investigations by Richard Bradley and Ann Ellison in 1972–3 revealed that a substantial timber-laced earthwork dating to the twelfth century BC bounded the central communal space with several entrances leading off in different directions. There were very few traces of domestic occupation and it is notable that the site overlooked a range of different landscapes. Moreover, pottery from the site represented many different fabrics and was drawn from a wide hinterland. Ann Ellison found that weapon and ornament finds cluster in the neighbourhood of these enclosure sites, and suggests that each acted as a focus for the distribution of objects, and was located at the junction of several community areas. In this way the sites served to link small-scale interlocking exchange networks, a view reinforced by the discovery at Norton Fitzwarren, Somerset, of an Ornament Horizon hoard of twelve bronzes – nine bracelets, two palstaves, and a socketed axe – deposited in the enclosure ditch.

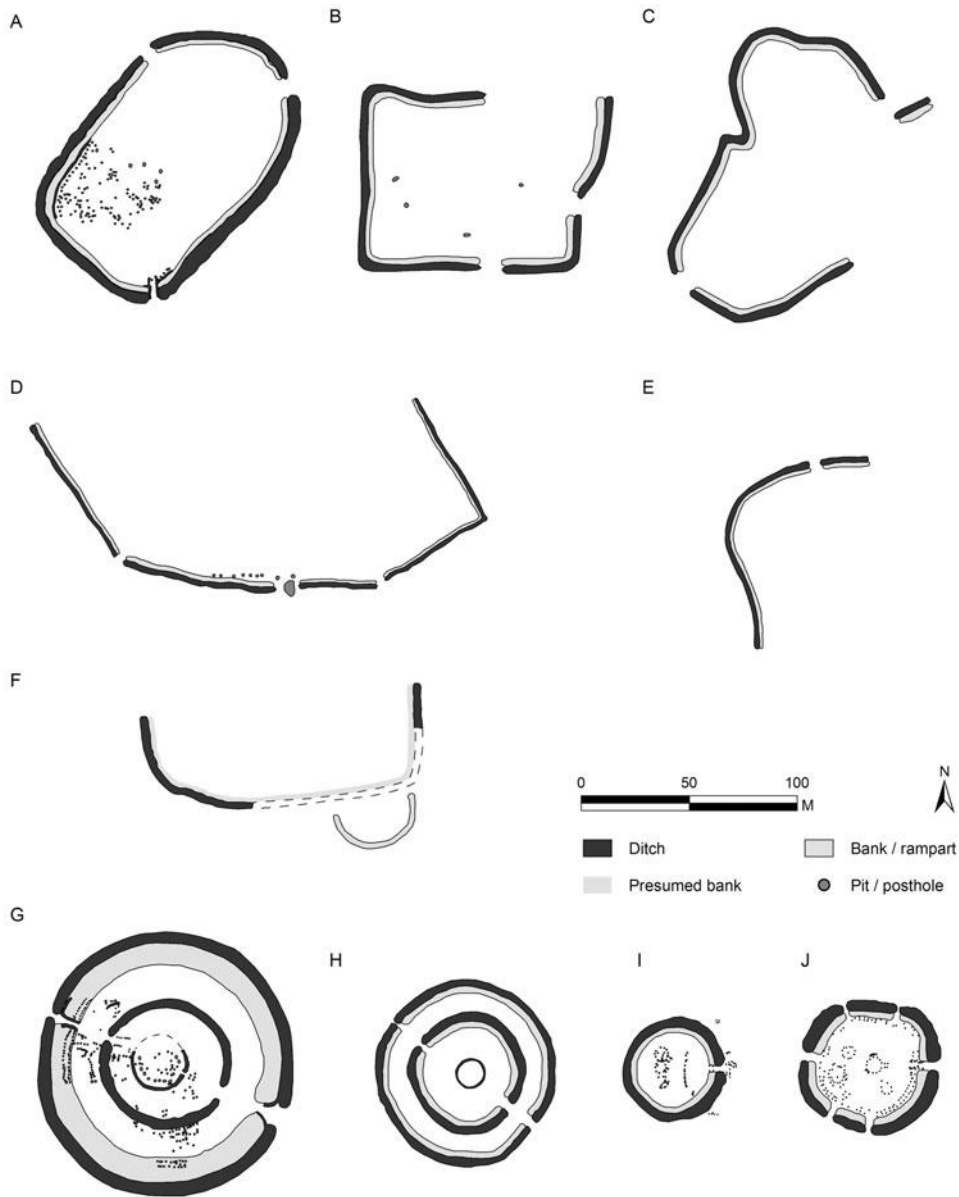
On the north Wessex Downs, through the upper Thames Valley and onto the Cotswolds, broadly similar communal sites are represented by large open-sided enclosures named after the site at Wiggold, Gloucestershire, often with an elaborate entrance opening onto an extensive landscape with panoramic views (92C–F). Examples include Swallowcliffe Down and Ogbourne Down West in Wiltshire, and Wiggold and Morton-in-Marsh, Gloucestershire.

Eastwards and northwards, a third type of enclosure, the Springfield type (also known as ring-forts), probably filled the same role (92G–J). The type-site at Springfield Lyons, Essex, comprised a substantial enclosure built in the tenth or ninth century BC, 54m in diameter internally and bounded by a timber-framed rampart and outer ditch with no fewer than six entranceways. The main entrance opened to the east. Inside were three roundhouses, one more or less central with a door opening towards the main entrance. Two similar sites at Mucking, Thurrock, had been superimposed on an existing fieldsystem. The South Ring dates to 1201–800 BC (HAR-1630: 2790±90 BP); the North Ring slightly later. At Thwing, East Riding of Yorkshire, a Springfield-type enclosure dating to 1310–910 BC (HAR-1398: 2900±70 BP) seems to have been built inside an earlier henge. The rampart here was braced with timbers and the ditch was deep and wide. At the centre of the site was a large roundhouse 28m in diameter which yielded a quern, two rubbing stones, two complete loom weights, spindle whorls, pottery, and animal bones of cattle, pig, sheep, and horse. Bronze weapons and personal ornaments were also found.

Enclosed meeting places ceased to be built after about 1000 BC, but their role as meeting places seems to have been taken over by feasting sites each of which generated large amounts of refuse that was gathered up and deposited nearby as a midden. In some cases these partly overlie earlier enclosures, as at Chisenbury, Wiltshire, where the accumulated deposits cover an area of 5ha. On a more modest scale Swallowcliffe Down, Wiltshire, and Wiggold, Gloucestershire, include substantial quantities of discarded pottery, animal bone, working waste, and a variety of ornaments and dress fittings preserved in the upper fills of the earlier enclosure ditches. In other cases extensive middens developed in previously unused locations, as at: Runnymede, Surrey; Potterne, Wiltshire; Wallingford, Oxfordshire; and All Cannings Cross, Wiltshire. At Llanmaes, Vale of



**Figure 91** Map showing regional styles of Deverel-Rimbury Ware and the position of late second millennium BC enclosures linked to regional exchange. [Source: Author]



**Figure 92** Ground plans of late second millennium BC enclosures in southern Britain. Rams Hill Type (A: Rams Hill, Oxfordshire; B: Martin Down, Hampshire; C: Ogbourne, Wiltshire); Wiggold Type (D: Wiggold, Gloucestershire; E: Blenheim Farm, Gloucestershire; F: Swallowcliffe, Wiltshire) and Springfield Type (G: Thwing, East Riding of Yorkshire; H: South Rings, Mucking, Thurrock; I: North Rings, Mucking Thurrock; J: Springfield Lyons, Chelmsford, Essex). [After Bradley and Ellison 1975, fig. 1.2; Hart and Alexander 2007, figs. 20 and 21; Cunliffe 2004, fig. 3.6 and 3.9; author]

Glamorgan, feasting seems to have focused on the consumption of pig, especially the right fore-quarters, and here too a midden developed during the tenth century BC.

Moving between these meeting places and the settlements they served, or on a more everyday basis moving between settlements, relied heavily on the use of rivers. More than 20 log-boat canoes have been found dating from the second millennium BC as well as four plank-built boats. The Dover Boat has already been discussed because of its seagoing capabilities, but three from North Ferriby, East Riding of Yorkshire, variously dating to 1390–1130 BC for boat 1 and 1310–1060 BC for boat 3, were probably river craft. Dendrochronology on parts from a boat found in the Severn Estuary at Goldcliffe, Newport, revealed that timber for this vessel was felled in 1017 BC. To use these boats, jetties must have been common along large and small rivers during the later second millennium BC, and examples have been found beside the Thames at Egham, Surrey, and at Testwood Lakes, Hampshire. At Sharlow, Derbyshire, the remains of a boat dated to about 1300 BC were found in 1998 next to a timber causeway linking an island in the River Trent with the adjacent riverbank. Curiously the boat had been sunk while carrying a cargo of flattish sandstone blocks, perhaps material intended for surfacing the causeway. Excavations for the construction of the Eton Rowing Lake near Dorney, Buckinghamshire, revealed the remains of a wooden bridge or causeway dating to the fourteenth century BC spanning an old channel of the River Thames.

Tracks across land were also important, but leave very little archaeological trace. There is a commonly held view that some ancient long-distance routes such as the Ridgeway/Icknield Way running from Salisbury Plain to the Wash, and the Jurassic Way along the spine of the Cotswolds, originate in this period but direct evidence is lacking. In the wetlands, however, wooden trackways continued to be built through the later second and early first millennium BC, among them the Meare Heath Track and the Eclipse Track linking the Polden Hills with Meare Island, and Tinney's Track linking the Poldens with Glastonbury, in the Somerset Levels.

Horses were used for travel during the later second millennium BC, and from the tenth century BC onwards harness fittings are visible in the archaeological record. The earliest are cheek pieces and strap fittings, the former in antler or bronze, the latter always in bronze and identical with continental examples. Other associated objects include pendants and bronze phalera, all of which are closely linked with horse-riding in Europe, and appear in metalwork hoards from the Ewart Park industrial phase onwards. The large hoard of objects deposited in a cave at Heathery Burn, Durham, contained a variety of horse trappings.

Some horse tack from around the turn of the first millennium BC suggests the presence of wagons or carts, but exactly how such vehicles were used is unclear. The earliest wheels from Britain include a tripartite ash-wood disc from Blair Drummond, Perth and Kinross, dated to 1250–800 BC (OxA-3538: 2810±85 BP), an ash wheel from Cottenham, Cambridgeshire, and an alder wheel about 80cm in diameter from Flag Fen, Peterborough. Few roads can have existed, although possible cart-ruts of this period with a spacing of 1.1m have been identified at Welland Bank Quarry near Market Deeping, Lincolnshire.

## ENVIRONMENTAL CHANGE?

It is always difficult to know how much emphasis to place on long-term environmental change as a factor in social change. A succession of bad harvests or minor fluctuations in weather patterns can be disastrous for communities living in marginal areas, but around the turn of the first millennium BC environmental changes seem to have had a more wide-ranging effect. Temperatures generally fell and rainfall increased. This was accompanied by widespread coastal inundation. The eruption of Mount Hekla in southern Iceland in *c.*1159 BC may have caused localized environmental damage and there is evidence for settlement discontinuity during the twelfth century BC at a site in Lairg, Highland. At Black Crofts near North Cannel, Argyll and Bute, field boundaries constructed in heathland soon after 1000 BC have been interpreted as an attempt to promote the regeneration of fertile land for cultivation.

Cooler, wetter, conditions are also implied by a renewed episode of track-building in the Somerset Levels, and many upland areas and marginal lowlands like the New Forest and the heathlands of Dorset and Surrey were abandoned. On Dartmoor and in many upland parts of Wales blanket bog began to form over abandoned fields during the early first millennium BC. Soil fertility in these areas did not recover and natural woodland did not regenerate. Paradoxically, although these areas are often considered ‘natural’ by today’s visitors and tourists, most of our moors and heaths owe their origin to the phase of widespread settlement, intensive land use, and over-exploitation during an environmental downturn in the early first millennium BC.

## WEAPONS, FORTS, AND RANCHES

The intensification of land use after 1500 BC implies an overall increase in population, and more particularly population density, over much of Britain. Thus the effects of soil exhaustion and climatic deterioration after 1000 BC would have created considerable stress as diminishing resources were expected to support high population levels. Especially badly hit were areas flanking the marginal lands of western Britain. The changes which resulted from this social pressure are most clearly seen in southern Britain but, as we shall see in a later section, the north did not escape unscathed.

### *Fields and boundaries*

Perhaps the most visible sign of change in the early first millennium was in the reorganization of the landscape. It was not only the fieldsystems of upland areas which were abandoned: the Celtic fields of Wessex and the Midlands also fell out of use and instead the landscape was divided up into large open areas by linear earthworks, or ranch boundaries as they are sometimes called. These boundaries were not set out evenly and regularly as the fieldsystems had been; rather they are

sinuous straggly earthworks – usually a bank and ditch – running for many kilometres across the countryside with every suggestion that their creation was a compromise border between the holdings of adjacent landowners. In Hampshire and Wiltshire they are especially numerous, but are less common in Dorset west of the River Stour. Most are from 3m to 6m across, required considerable effort to build, and were sometimes aligned on earlier barrows and natural landscape features.

Outside Wessex linear boundaries are often badly preserved but are nonetheless present and can sometimes be found through aerial photography. Reconnaissance work by Jim Pickering has revealed many boundaries in the Midlands, some certainly of this period, and similar earthworks have been detected in Humberside, Yorkshire, Cumbria, Shropshire, Gloucestershire, and Berkshire. In some cases they divide plateau land; elsewhere they cut off promontories.

Associating linear boundaries with a particular subsistence economy is more difficult. Few associated sites have been excavated, and while it is tempting to think in terms of what Barry Cunliffe once referred to as Wessex Cowboys cattle-punching across the downlands, solid support is far from widespread. It is noteworthy, however, that at Grimthorpe near Millington, East Riding of Yorkshire, cattle bones accounted for 54 per cent of all bones recovered, and at Ivinghoe Beacon, Buckinghamshire, cattle bones represented 60 per cent of bones found at tenth-century levels.

### ***Defended enclosures and weapons***

In a few areas, notably the Welsh Marches and other upland peripheries, hilltop settlements developed, as at Mam Tor, Derbyshire, where roundhouses were terraced into the upper hill-slopes around 1000 BC. None of these early hilltop settlements were initially fortified as such, perhaps because their position alone provided safety. But by 900 BC the situation had changed and hilltop enclosures were being defended with timber-framed ramparts to great effect, heralding the start of several centuries of intensive and widespread hillfort-building.

Three sites in the northern part of the Welsh Marches at Breiddin, Powys, Llwyn Bryn-dinas, Powys, and Dinorben, Conwy, illustrate this development very well. All were seemingly occupied before the ninth century BC, but neither was indisputably enclosed or fortified at that time. Charcoal from postholes of the primary rampart at Breiddin provided a primary date of 1120–800 BC (BM-879: 2778±71 BP), while a second determination on charcoal from the core of the rampart yielded a date of 1000–820 BC (BM-878: 2750±41 BP). Together these suggest a ninth-century date for the establishment of the defences. The same applies at Dinorben where a radiocarbon date from excavations by Hubert Savory suggests that the defences were built soon after 1125–670 BC (V-125: 2715±85 BP) and the first stage of Llwyn Bryn-dinas dates to 997–795 BC (CAR-802: 2710±60 BP).

Around 60 palisaded enclosures have been found over a wide swathe of north-eastern England from North Yorkshire northwards across Northumberland, into the Cheviots, and on into the Scottish Borders. Few have been excavated but some at least date to the early first millennium, as in the case of Fenton Hill, Northumberland, constructed in the ninth century BC.

The need for defence is coincident with the development of a greater range of weapons during the Ewart Park industrial phase, especially swords. Round metal shields appear in Britain during the Penard industrial phase perhaps as early as the twelfth century, presumably imitations of more practical leather or wooden examples which simply do not survive. Horses were important to the warriors of the early first millennium. Evidence for harness arrangements has already been mentioned but their value for the swordsman is emphasized by the fact that winged chapes to grace the end of sword scabbards develop after the introduction of the slashing sword, presumably so that the sword could be drawn while riding by hooking the chape under the left foot. They are a notable feature of hoards from the Ewart Park industry and later.

There is some evidence to suggest that weapons from this period saw action. From Tormarton, South Gloucestershire, the remains of two young men were found buried in a pit or ditch. The first body had a hole through the pelvis caused by a bronze spearhead being thrust into his right side. The second body had a similar hole through the pelvis, traces of a severe blow to the head and the tip of a bronze spearhead embedded in his spine (93). Radiocarbon dates suggest this incident took place around 1390–920 BC (BM-542: 2927±90 BP).

Throughout it is important to distinguish between functional weapons on the one hand and on the other those which are too ornate to be useful and which were presumably just for show. The importance of such parade weapons can be traced back to the battle-axes and copper daggers of the early second millennium with their ritual rather than practical purpose, although by the first millennium the range and quality of such items was outstanding. The spearheads of Broadward type with their large flat blades and pointed barbs, the round beaten bronze shields, and indeed some of the ornate swords, could not have served well in battle, and, not surprisingly, are rarely found in damaged condition. As Colin Burgess has remarked, the sensible warrior would have equipped himself with something more practical once the parading about stopped and the real fighting began.

## SOCIETY AND POLITICS

After a millennium of continuous adaptation and change the societies which covered most of Britain in the early first millennium were very different from their second millennium BC predecessors. The early chiefdoms discussed in the last chapter had by this time cemented into powerful political units forming their own destiny and seemingly prepared to fight each other for power or resources. Defining the territories of these societies is extremely difficult. Localized autonomous or semi-autonomous communities undoubtedly provided the basic social unit, but on a larger scale Colin Burgess has been able to discern a series of broad social areas each with a distinct repertoire of weaponry in the tenth and ninth centuries BC (94). The first extends over a great triangular area with its apex in south Yorkshire, extending down the eastern edge of the Cotswolds and spreading out into southern England and the Thames Valley. Here the Carp's Tongue Tradition shows a preference for swords, although spears were widely used. To the





**Figure 93** Burial from Tormarton, South Gloucestershire, showing the tip of a bronze spearhead in the spine of a young adult male. The position where the tip lodged can be seen by the staining on the vertebrae. Dated to about 1100 BC.[Photograph by Timothy Darvill courtesy of Bristol City Museum. Copyright reserved]

north-west was the Broadward Tradition dominated by spearmen. In the south-west of England the Stogursey Tradition is also dominated by spears with some use of swords. From Yorkshire to the Scottish Borders was the Heathery Burn Tradition characterized by swordsmen's hoards containing up to three swords and accompanying chapes and rings suggesting the importance of horse-riding to these warriors. In the far north the Duddlingston-Covesea Tradition also favoured swords with some generally small spears.

But besides the warrior element there were two other features of this society emerging in the early first millennium BC that deserve mention because of their implications for what happens in



Figure 94 Map showing regional metalworking traditions and the hillfort zone of the early first millennium BC. [After Collard *et al.* 2006, fig. 19, with additions]

later first millennium BC. First is the hierarchy of settlements that starts with the regional meeting places serving local villages and farmsteads, and becomes more pronounced as differences between small open settlements and enclosed or defended sites become increasingly visible. Whether this corresponds to a hierarchy within society is not clear, but it does seem that not everyone had access to the fine metalwork so commonly deposited in wet places. The evidence available for metalworking suggests that the skilled smiths engaged in making weapons and fine sheet metal objects were closely tied to a chief or powerful leader. Horsemanship, combat, and display were closely linked and clearly a fundamental part of the political system. European influence was strong, and closely related languages can be suspected.

Second is the role of feasting that again starts on a modest scale but ultimately causes the accumulation of great middens in some areas after about 900 BC (94). The large cauldrons and buckets found in Britain stand at the head of a long-lived tradition of eating and drinking ceremonies which were common over large parts of Europe throughout the first millennium. Accompanying some cauldrons are so-called flesh-hooks used to serve the contents of the container. If later analogies are correct then meat was cooked in these sheet bronze vessels and served with the flesh-hook in such a way that the precise standing of each warrior in the chief's retinue would be reflected in the particular portion of meat given to him. These things combined are the first signs of what may be identified as Celtic society in Britain.

# 7

## BROTHERS IN ARMS

### Tribes and chiefdoms 800–100 BC

The events of the early first millennium BC set the stage for what followed. Fewer resources balanced against greater demands, whether because of environmental change, social factors, or a combination of the two, led to a period of aggression, unrest, uncertainty and tension. Traditionally, the emergence of a hillfort-based society after about 650 BC is interpreted as the response to these conflicts, and in some areas that may be true. But taking Britain as a whole, the problems of the early first millennium were resolved in different ways in different places. Especially important were regional variations in subsistence economy, political organization, and social structure.

Deterioration of the climate during late second and early first millennium BC reversed after about 600 BC when a period of global warming signalled the start of the Sub-Atlantic biostratigraphic division (Pollen Zone IX) in which warmer and drier conditions prevailed until, by about 300 BC, the climate was seemingly much like that of recent times. Upland settlement remained sparse, mostly focused in sheltered valleys, but in lowland areas settlement expanded as a continuous process of intensification within good agricultural land and incremental extensification that drew in more marginal landscapes. Surprisingly, even the heavy clay-lands of southern Britain, traditionally regarded as densely wooded and unsettled until medieval times, were brought into intensive exploitation by the third century BC.

Archaeologically, the later first millennium BC is dominated by its settlements and agricultural infrastructure. Best known are the hillforts, of which over 3,000 have been recorded in Britain as a whole. But the term ‘hillfort’ is widely applied to almost any hilltop defended settlement thereby concealing important regional, chronological, and functional variations. Other equally important recognizable types of settlement include ditched enclosures of many shapes and sizes, palisaded enclosures, unenclosed villages, brochs, duns, raths, crannogs, and many more. So many settlements are known in some areas that an overall increase in the size of the population, and in population density, is suggested.

Warfare in the form of inter-community aggression was a central theme of social relations in some parts of Britain during the later first millennium, although the ways of containing, legitimizing, and playing it out changed over time. In this, hillforts and other defended settlements were the arenas for action where brothers in arms could defend themselves and their community against raiders and assailants. But these sites also reflect deep-seated modes of social and economic organization, the form and location of individual sites being largely dictated by their status, economic function, subsistence base, and local environment. Taking Britain as a whole it seems that the five broad regional groupings of the earlier first millennium provided the foundations for an increasingly complicated political and social geography after about 600 BC. This is most clearly visible in the growing localization of artefact styles and settlement types, diversification of the subsistence base, and greater self-sufficiency among individual communities. Common to all areas of Britain is a basic social segment often referred to as the 'household-unit', an idea replete with implications of a residential unit for an extended kinship group and a role in the daily routines of agricultural production. Almost universally, these household-units were physically focused on a roundhouse, but how such houses and units were arranged and combined in relation to each other and to features such as boundaries, trackways, and fieldsystems varied across time and space and underpins increasingly visible local identities. Cross-cutting the common residential pattern were diverse systems of control over the supply of essential resources, among them metal ores, salt, and imported luxury items. Both structures are key to understanding the differing responses to the problems of the early first millennium.

Traditionally, the period 800 BC to 600 BC was characterized by invasions and migrations of warrior-led groups from the Continent, who in their homelands were associated with the emerging La Tène Cultures, and were thus familiar with a distinctive curvilinear style of art and design. Greek writers of the mid first millennium BC referred to people living around the source of the Danube at the time as *keltoi* and the term was soon appropriated by nineteenth-century scholars who renamed the artistic style as 'Celtic art' and coupled its spread outwards from central Europe to the north-west with the adoption of a widespread family of so-called Celtic languages. Some of these languages, it was argued, survive around the fringes of the original distribution as Irish, Manx and Scottish Gaelic, Pictish, Welsh, Cornish, and Breton. This in turn served to breathe life into the idea of the Celts as a recognized nation, race, or ethnic group, and the people living in Britain during the later first millennium BC as essentially insular Celts. For some ancient writers the word *keltoi* or *celti* became a rather general derogatory term used at least as early as the sixth century BC by Hecataeus, Herodotus, and others, to refer collectively to what they considered to be barbarians living beyond the boundaries of their civilized world. Curiously, no classical writer ever referred to Britain as Celtic.

For Simon James and others the idea of recognizably Celtic people in Britain in later prehistory is a factoid, a theoretical construct masquerading as a fact involving the reification of a people that never existed, although they accept that modern communities with a shared sense of history and culture along the Atlantic coastlands of Europe identify themselves as modern Celts in what would be a true case of ethnogenesis. On the other hand Stephen Oppenheimer has argued

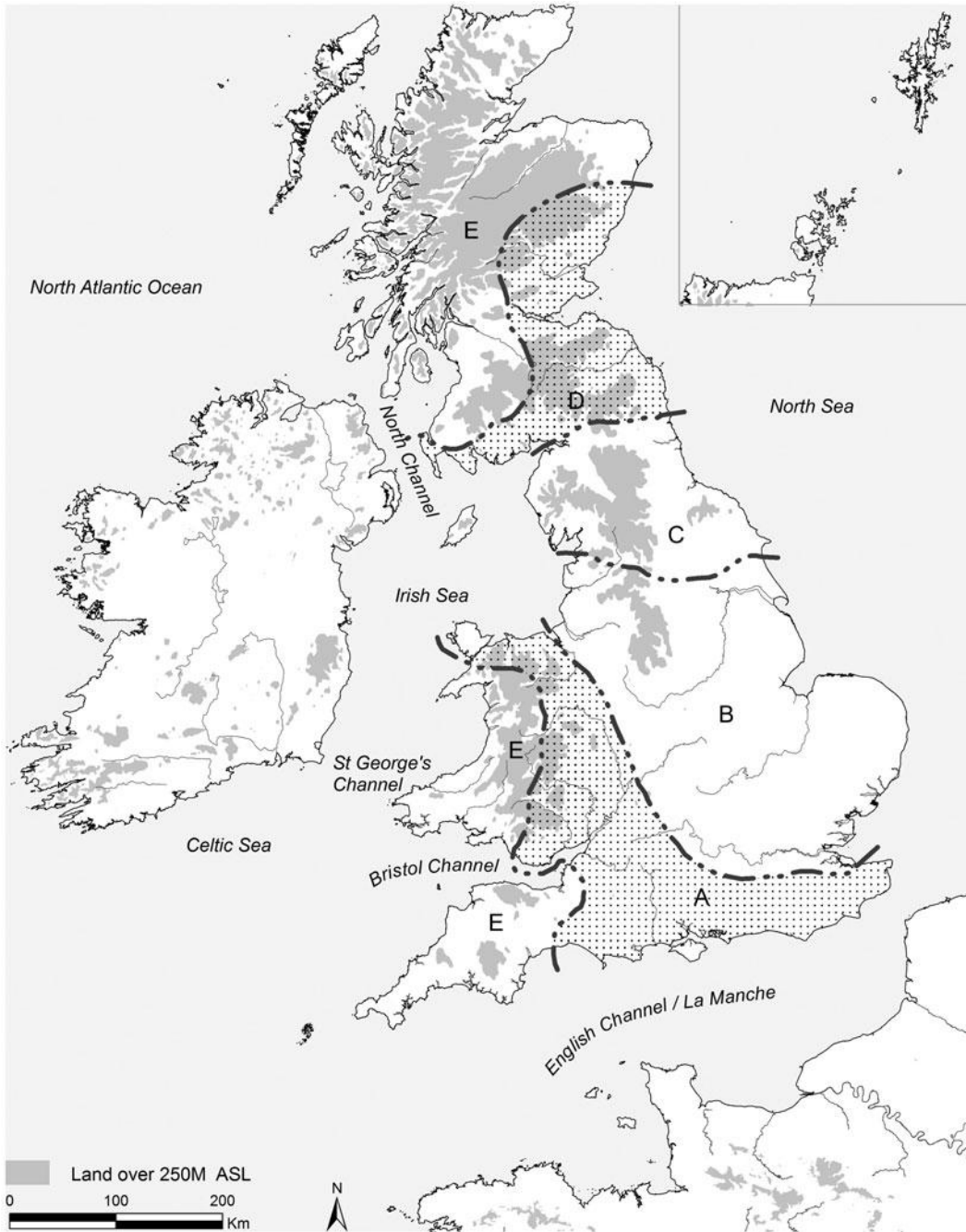
against this sceptical view, noting that the Greek writers rightly identified a distinctive and ancient ethnic group whom they called *keltoi*, but through a series of geographical misunderstandings they thought the source of the Danube was much further west than it really is and thus the *keltoi* were really the indigenous people of Iberia, western Gaul, and the Atlantic seaways. Here their genetic signature can still be recognized in modern populations, and it is here that the descendent languages are still spoken (and see Chapter 8).

Back in the middle centuries of the first millennium BC five broad regions can be recognized (95) in terms of their trajectory of development, economy, and social organization: (A) Southern Hillfort Zone across southern, central, and western England, the Welsh Marches and North Wales; (B) Open Settlement Zone of eastern England and East Anglia; (C) Enclosed Homestead Zone of northern and north-eastern England; (D) Northern Hillfort Zone of southern and eastern Scotland; and (E) Defended Homestead Zone of Atlantic Britain. Each area is considered in detail in the following sections. However, understanding the sequence and the contemporaneity of sites during this period is made difficult by problems with the calibration of radiocarbon dates as a result of plateaus in the level of atmospheric carbon-14 producing wide date ranges. Changing ceramic styles worked out in detail by Barry Cunliffe and others provide an alternative for some areas, but large parts of northern Britain appear to have been rather poor in ceramics through the later first millennium BC so this indicator is also of limited value (see Table I).

## SOUTHERN HILLFORT ZONE

This region, occupying a broad crescent sweeping across the country from Kent and Sussex in the south, westward through Hampshire and Dorset, northward through Wiltshire, Gloucestershire, Herefordshire and Worcestershire, and then up through the Welsh Marches into North Wales, has been christened the hillfort-dominated zone by Barry Cunliffe. It was here that the greatest effects of early first millennium changes were felt, and here that the earliest hillforts sprang up. Andrew Sherratt has noted how a series of rivers all now called the Avon, a name derived from the Celtic word *abona* (Welsh *afon*) simply meaning ‘river’, articulate the southern part of the region, and when connected to the middle section of the River Severn and the River Dee provide a corridor linking the English Channel with the Irish Sea. No surprise, he suggests, that this was a prehistoric superhighway and that people living along it felt threatened at times of change and unrest.

Concerns with defence and the demarcation of land ownership that started in this area in the tenth and ninth centuries BC (Chapter 6) continue through the eighth century. Linear earthworks were constructed on the downlands and in the hill and vale country across the region. An extensive study of those on Salisbury Plain shows how they developed over several centuries. In the eighth century BC some ditches were recut in order to provide chalk rubble to enhance the bank while parts of the system were reorganized to create larger territorial units. Finally, a number of early hillforts were added; in the case of Sidbury, Wiltshire, and Quarley Hill, Hampshire, these



**Figure 95** Map showing regional settlement traditions in the mid first millennium BC. A: Southern Hillfort Zone; B: Open Settlement Zone; C: Enclosed Homestead Zone; D: Northern Hillfort Zone; E: Fortified Homestead Zone. [After Cunliffe 2004, fig. 4.3 and Rivet 1967, end map, with additions]

**Table I.** Summary of the main regional pottery styles current across Britain between the 800 BC and 200 BC. [Source: Cunliffe 2004, with additions]

| Zones and regions        |                                                                      | 800–700 BC<br>eighth century                                               | 700–600 BC<br>seventh century                                      | 600–400 BC<br>sixth and fifth<br>centuries                            | 400–200 BC<br>fourth and third<br>centuries                                                                             |
|--------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Southern Hillfort Zone   | Hampshire, Oxfordshire, Sussex, and Kent                             | Decorated Post-Deverel-Rimbury Ware (DPDR)                                 | Kimmeridge-Caburn-West Harling-Staple Howe style                   | Park Brow-Caesar's Camp style                                         | St Catherine's Hill-Worthy Down; Caburn-Cissbury; and Hawk's Hill-West Clandon styles                                   |
|                          | Dorset, Somerset, and Gloucestershire beyond the upper Thames Valley | Early All Cannings Cross style; Decorated Post-Deverel-Rimbury Ware (DPDR) | Late All Cannings Cross style; Ivinghoe-Sandy-Crickley Hill styles | All Cannings Cross-Meon Hill style; Long Whittenham-Allen's Pit style | Maiden Castle-Marnhull style; Glastonbury-Blaise Castle style; Croft Ambrey-Bredon Hill style; Yarnbury-Highfield style |
|                          | Welsh Marches                                                        | Regional Post-Deverel-Rimbury Ware                                         | ?Regional Post-Deverel-Rimbury Ware                                | [Ceramic-poor]                                                        | Croft Ambrey-Bredon Hill style; Lydney-Llanmelin style                                                                  |
|                          | North Wales                                                          | [Ceramic-poor]                                                             | [Ceramic-poor]                                                     | [Ceramic-poor]                                                        | ?ceramic                                                                                                                |
| Open Settlement Zone     | Thames Valley                                                        | Decorated Post-Deverel-Rimbury Ware (DPDR)                                 | Kimmeridge-Caburn-West Harling-Staple Howe style                   | Park Brow-Caesar's Camp style                                         | Southcote-Blewburton style; Stanton Harcourt-Cassington style; Mucking-Crayford style                                   |
|                          | South Midlands                                                       | Decorated Post-Deverel-Rimbury Ware (DPDR)                                 | Ivinghoe-Sandy-Crickley Hill styles                                | Chinnor-Wandlebury style; Breedon-Ancaster style                      | Breedon-Ancaster style                                                                                                  |
|                          | East Anglia                                                          | Decorated Post-Deverel-Rimbury Ware (DPDR)                                 | Kimmeridge-Caburn-West Harling-Staple Howe style                   | Darmsden-Linton style; Fengate-Cromer style                           | Decorated bowls                                                                                                         |
|                          | Midlands and Cheshire Plain                                          | Decorated Post-Deverel-Rimbury Ware (DPDR)                                 | ?Decorated Post-Deverel-Rimbury Ware (DPDR)                        | Breedon-Ancaster style                                                | Croft Ambrey-Bredon Hill style; Hunsbury-Draughton style                                                                |
|                          | Lincolnshire and East Riding of Yorkshire                            | Decorated Post-Deverel-Rimbury Ware (DPDR)                                 | ?Decorated Post-Deverel-Rimbury Ware (DPDR)                        | Breedon-Ancaster style                                                | Sleaford-Dragonby style                                                                                                 |
| Enclosed Homestead Zone  | North Yorkshire                                                      | Decorated Post-Deverel-Rimbury Ware (DPDR)                                 | Kimmeridge-Caburn-West Harling-Staple Howe style                   | Cowlam Style                                                          | Dane's Graves-Staxton style                                                                                             |
|                          | Durham and Northumberland                                            | [Ceramic-poor]                                                             | [Ceramic-poor]                                                     | [Ceramic-poor]                                                        | [Ceramic-poor]                                                                                                          |
|                          | Pennines and Cumbria                                                 | [Ceramic-poor]                                                             | [Ceramic-poor]                                                     | [Ceramic-poor]                                                        | [Ceramic-poor]                                                                                                          |
| Northern Hillfort Zone   | Borders/Southern uplands                                             | Traprain Ware                                                              | Traprain Ware                                                      | [Ceramic-poor]                                                        | [Ceramic-poor]                                                                                                          |
|                          | Solway Coast                                                         | [Ceramic-poor]                                                             | [Ceramic-poor]                                                     | [Ceramic-poor]                                                        | [Ceramic-poor]                                                                                                          |
|                          | Isle of Man                                                          | [Ceramic-poor]                                                             | [Ceramic-poor]                                                     | [Ceramic-poor]                                                        | [Ceramic-poor]                                                                                                          |
|                          | Tayside, Fife, Central                                               | [Ceramic-poor]                                                             | [Ceramic-poor]                                                     | [Ceramic-poor]                                                        | [Ceramic-poor]                                                                                                          |
| Fortified Homestead Zone | Devon and Cornwall                                                   | Late Trevisker Ware                                                        | [Ceramic-poor]                                                     | [Ceramic-poor]                                                        | Cornish Corded Wares; SW decorated Wares                                                                                |
|                          | Southwest and central Wales                                          | [Ceramic-poor]                                                             | [Ceramic-poor]                                                     | [Ceramic-poor]                                                        | Southwest Wales Class A Wares                                                                                           |
|                          | Western Isles and Highlands                                          | [Ceramic-poor]                                                             | [Ceramic-poor]                                                     | Hebridean Ware                                                        | Hebridean Ware; NW Decorated Ware                                                                                       |
|                          | Orkney and Shetland                                                  | [Ceramic-poor]                                                             | [Ceramic-poor]                                                     | [Ceramic-poor]                                                        | [Ceramic-poor]                                                                                                          |



were situated at nodes in the boundary system suggesting their role involved serving several adjacent landholdings. Similarly, at Danebury, Hampshire, an early hillfort of 5.3ha was built in the fifth century BC within a loop formed by a linear ditch system that extended eastwards for at least 2km. On Cranborne Chase, Bokerly Dyke along the borderland between Dorset and Hampshire forms a major boundary, while further north substantial linear earthworks have been recognized at many sites including Cleeve Common, Gloucestershire, and Kerry Hill, Powys.

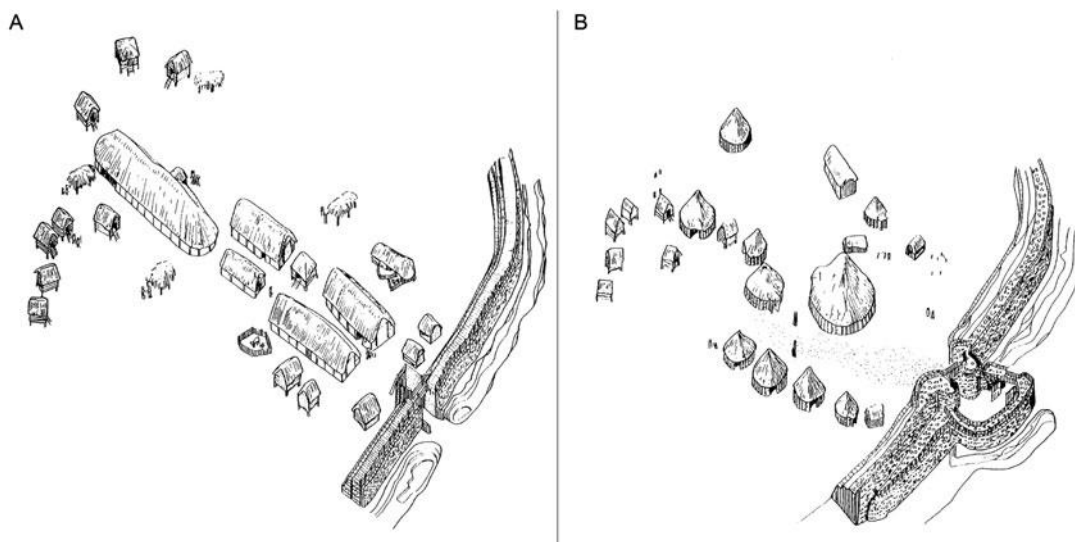
In river valleys and on lower ground pit alignments take the place of linear earthworks. They comprise lines of round or rectangular pits, sometimes multiple, the upcast from which presumably formed a continuous adjoining bank. Finds are generally few and the pits do not appear to have served any specialist function. An excavated example at Lechlade, Gloucestershire, appears to divide a gravel terrace between the rivers Thames and Leach; others have been recorded through aerial photography at Temple Guiting and Great Rissington, Gloucestershire. None have been found in direct association with occupation sites and they seem to have served purely as boundaries. Their design may have been intended to stop riders on horseback rather than people on foot.

Middens of the kind arising from feasting and festival sites (see Chapter 6) such as at All Cannings Cross, Wiltshire, and Llanmaes, Vale of Glamorgan, continued to accumulate through the eighth and seventh centuries BC, but not much beyond. Identity and connections with the land itself were perhaps marked in other ways, for example cutting by geoglyphs. A unique survival of this period is the White Horse at Uffington, Oxfordshire, which optically stimulated luminescence (OSL) dating suggests was constructed in the period 1380–550 BC. The horse, which measures 111m long, was marked in the hillside by cutting a trench and filling it with rammed chalk. Its distinctive outline is highly stylized, but not unlike other later prehistoric representations of horses in central southern England, for example those on coins minted in the first century BC and later. The position of the horse overlooking the upper Thames Valley 2km west of Ram's Hill, Oxfordshire, and only 200m north of Uffington Castle suggests that its construction was closely linked to the history of these enclosures, the former remodelled in the seventh century BC and the latter constructed with a timber-framed rampart at much the same time.

### ***Early hillforts***

In the years following 700 BC a rash of hillforts developed across this zone. Broadly speaking they fall into two types: defended villages and large hilltop enclosures.

Defended villages developed the traditions already visible at Breiddin, Powys, and Dinorben, Conwy. Naturally defensible positions were chosen and stout timber-framed walls with stone packing provided the defences. Several have been extensively excavated, including Moel-y-Gaer, Denbighshire; Crickley Hill, Gloucestershire; Uffington Castle, Oxfordshire; Danebury, Hampshire; and Maiden Castle, Dorset. All are rather small, typically between 0.5 and 2.5ha,



**Figure 96** Crickley Hill, Gloucestershire. Reconstruction drawings of the successive phases of occupation within the hillfort. A: Long-house period settlement about 600 BC; B: Round-house period settlement about 500 BC. [After Dixon and Borne 1977, figs. 2 and 3 reproduced courtesy of Philip Dixon]

and usually have a single line of defences. Gateways as weak points received special attention with elaborate gate-towers over the entranceways. In southern England outworks and rampart extensions were constructed to create a tunnel-shaped or oblique approach to the gates themselves, and as time went by these elaborations tended to set the gateway further and further back from the portal. In the west an alternative elaboration was common; a pair of guard chambers flanked the entrance just inside the gateway, as for example at Leckhampton, Gloucestershire, and Titterstone Clee, Shropshire.

Inside these hillforts occupation was usually fairly dense, and many show signs of periodic remodelling. At Crickley Hill, Gloucestershire, two phases can be discerned (96). The early phase was characterized by rectangular houses together with four-post structures of a type found widely in Britain and generally interpreted as raised granaries. Later, the rectangular houses were replaced by roundhouses, timber-framed and up to 15m in diameter. At Moel-y-Gaer, Denbighshire, two phases can also be recognized. At first the site was bounded by a palisade with numerous post-built round structures, some of which were dwellings, in the interior. In the second phase four-posters clustered immediately behind a substantial rampart, while further inside the fort stake-walled roundhouses predominated. Further south still, at Danebury, Hampshire, the first hillfort enclosing 5.3ha within a single rampart fronted by a row of vertical timbers was built in the fifth century BC. It contained perhaps as many as 50 roundhouses, mostly on the south side, but instead of four-posters, which were rather few in number, circular pits or silos were dug into the solid chalk.

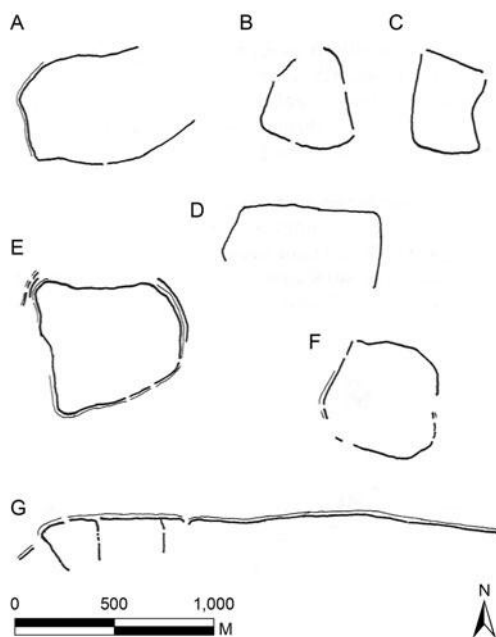
Experiments have shown that rock-cut pits provide extremely efficient grain silos. Research by Peter Reynolds at the Butser Hill Experimental Farm, Hampshire, demonstrated that once sealed down, grain-filled pits develop a carbon dioxide-rich atmosphere which prevents the germination of all but the outermost layer of grain. Only about 2 per cent of the amount stored is lost. Moreover, the germination rate of seed corn stored in this way is high and, as a bonus, once the pit is sealed the ground surface above is free for other uses. Storage pits may not only have been practical facilities. On the basis of the excavated areas at Danebury it has been estimated that originally there would have been about 3,600 storage pits within the hillfort. Spread out over the 450 years of occupation this equates to around eight new pits per year, a storage capacity of about 280 bushels of grain. Assuming one-fifth of the harvest is set aside in these pits each year as seed-corn, and a yield of 5:1, then about 1,120 bushels of grain were produced for consumption each year; enough to support a population of about 100. Of course, variations can be made to the underlying assumptions which vary this figure up or down, but, unless very pessimistic assumptions are allowed, a substantial population is implied, more so if pits were used for more than one year. Preserving seed-corn must have been of paramount importance and using pits may have been more than an expedient practical measure. Barry Cunliffe has suggested that depositing such a valuable resource in the ground placed it into the protection of the chthonic deities, a view supported by the discovery of burials and carefully placed offerings in pits after their use for storage.

Within most early hillforts that have been excavated there is evidence for discrete patterning of activities in the layout of the interior, with roadways, living areas, storage areas, and so on. To what extent this results from deliberate planning, or simply the common sense of the inhabitants wanting to minimize the risk of fire spreading through the site and so ordering their daily activities, is a matter for debate. Once established, however, the social use of space within the interior of these sites was adhered to for long periods.

Most early hillforts saw action. At Crickley Hill, Gloucestershire, the fort was attacked and overrun at the end of the long-house period of occupation. Philip Dixon, the excavator of the site, believes that a new population with contrasting traditions of building took over the fort, remodelled its defences, and constructed roundhouses in the interior. At other sites, burnt ramparts and periods of rebuilding after episodes of destruction attest active roles in inter-group warfare; at Danebury, Hampshire, for example, there is evidence of attack, limited burning of the rampart, and refurbishment with the construction of more elaborate gates.

### ***Hilltop enclosures***

The second class of site from this period comprises large hilltop enclosures, generally over 16ha in area, and defended by one or more lines of ramparts along weak parts of their perimeter, but often defined by natural slopes where these offered suitable protection (97). Among the most well-known examples are Nottingham Hill and Norbury Camp, Gloucestershire; Bathampton, Bath and North East Somerset; Balkerne, Hampshire; and Ogbury, Wiltshire. Excavations at Balkerne revealed



**Figure 97** Ground plans of hilltop enclosures in southern England. A: Bathampton, Bath and North East Somerset; B: Balksbury, Hampshire; C: Martinsell, Wiltshire; D: Norbury Camp, Gloucestershire; E: Walbury, Hampshire; F: Bosedown, West Berkshire; G: Bindon Hill, Dorset. [After Cunliffe 2004, fig. 15.23; Palmer 1984, fig. 6; and RCHME 1976, 89]

a dump rampart with an outer ditch. Very little evidence for occupation was found in the interior, at least in the areas examined. Equally scant traces of occupation were found in cuttings made through the ramparts at Bathampton Down, in 1965, although at Norbury excavations in 1977 revealed the presence of four-poster storage structures in the central part of the interior. At Nottingham Hill a hoard of Ewart Park phase bronzes including swords, a knife, a palstave, and a variety of tools and fittings was brought to light during ploughing in 1972.

The function of these large enclosures is unclear. Their great size and apparent low density of occupation suggests that they were stockyards and storage places, perhaps with settlement confined to a small area, but verification of this must await more excavation.

### ***Developed hillforts***

In the fourth century BC many of the early hillforts like Crickley Hill, Gloucestershire, were abandoned and not reoccupied, while others were elaborated and extended. In a few cases new sites were established. These developed hillforts as they are called tend to be larger than the early hillforts, up to 10ha in extent, and their defences often follow the natural contours of a suitable hill.

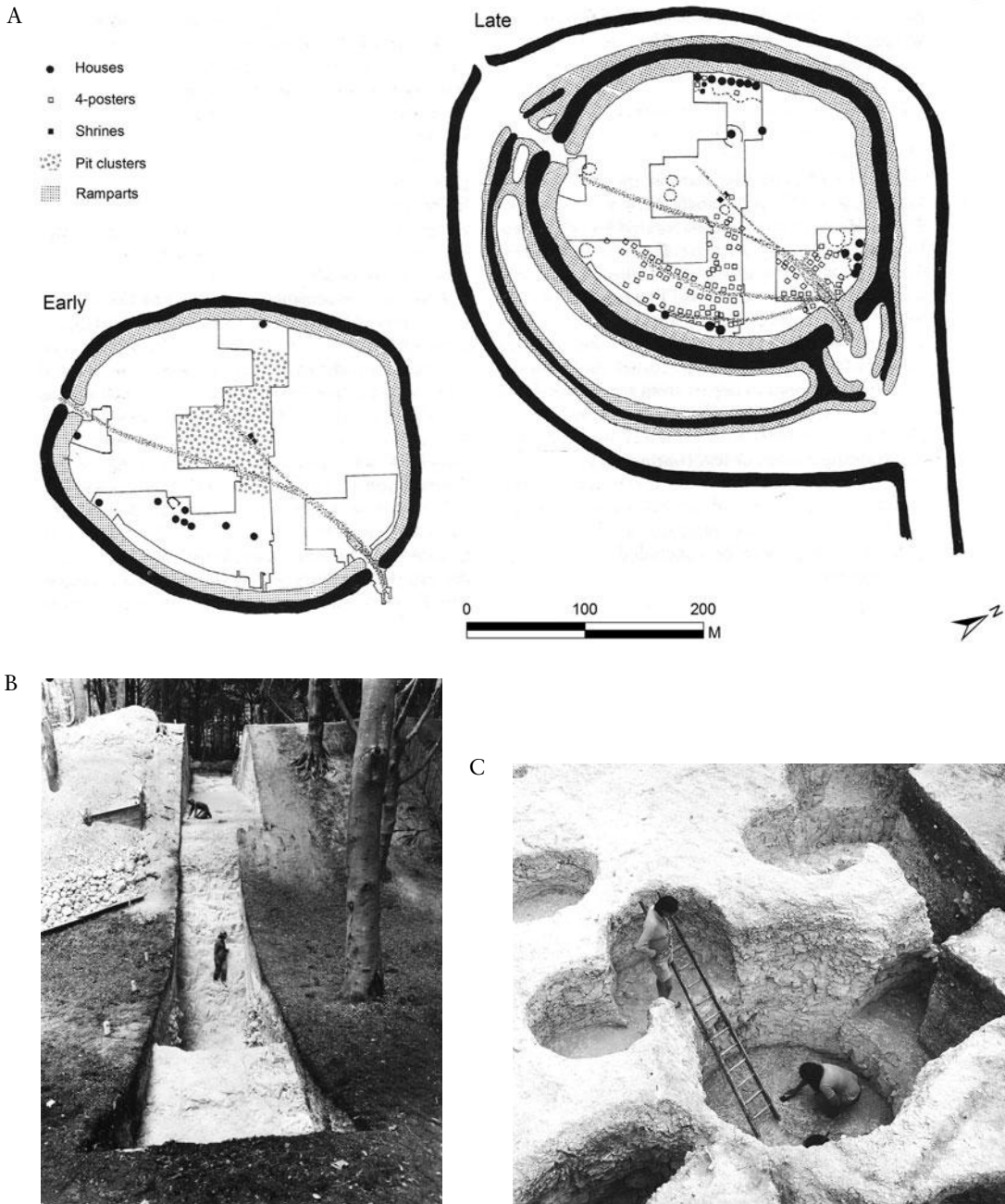
Multiple ramparts are usual, but rampart construction began to depart from the timber-laced forms of earlier centuries and instead glacis-style ramparts with a slightly battered front face forming a more or less continuous profile with the inner edge of the ditch became common. Careful use of existing slopes and natural features to exaggerate the scale of the ramparts was common, and it must be concluded that in many cases ostentation was as important as defence.

The density of developed hillforts is less than for the early hillforts, and where detailed spatial studies have been carried out, such as in central Hampshire, it seems that one site on each naturally defined block of land covering perhaps 10 to 20 square kilometres emerged as a developed hillfort with the simultaneous loss of surrounding early sites. It is also notable that many developed hillforts lie on the junction of two or more environmental zones suggesting that those living in them depended on the organized control of surrounding resources.

Danebury, Hampshire, excavated by Barry Cunliffe, is by far the most intensively studied developed hillfort in Britain (98). Nearly 60 per cent of the interior was investigated between 1969 and 1988 and the patterns revealed can be compared with evidence from other sites as far afield as Moel-y-Gaer, Denbighshire, Cadbury Castle, Somerset, and Maiden Castle, Dorset. Modifications to the defences at Danebury soon after 400 BC involved the construction of a second line of ramparts and the building of outworks at the entrances. The eastern entrance was particularly heavily defended with claw-like hornworks projecting beyond the line of the ramparts creating a curved entrance passage, above which was a strategically placed command post with a clear view over the entire entrance area. The whole arrangement was ideally suited for slingers and clay sling shot and suitable natural pebbles were found in considerable quantities here, as elsewhere, emphasizing the importance of this form of warfare. The interior of the site was densely occupied with circular houses set round the inner edge of the rampart, possibly as many as 50 being in use at any one time. Some of the interior was given over to storage, either in pits or in four-posters. Roadways ran through the site and these were maintained throughout the period of occupation. The implications of the evidence recovered from Danebury are that occupation was continuous, intensive, and under the control of a strong centralized power.

On the downlands of Sussex and Kent developed hillforts include the Trundle, West Sussex; Bigbury, Kent; and High Rocks, East Sussex. On the Cotswolds examples include Sodbury Camp, South Gloucestershire; and Uley Bury, Gloucestershire. Examples in the Welsh Marches include Herefordshire Beacon, Herefordshire; Croft Ambrey, Herefordshire; Caer Caradoc, Shropshire; Old Oswestry, Shropshire; and Moel Hiraddug, Clwyd. In north Wales topographic conditions limit the morphology of the hillforts present, and a form of defended hilltop settlement surrounded by a stone wall developed. The evidence from forts in Gwynedd, such as Garn Boduan, Tre'r Ceiri, Conway Mountain, and Dinas Gynfor on the Isle of Anglesey, shows that many of them were occupied by sizable communities of perhaps 100 to 400 people to judge from the number of visible stone roundhouse foundations.

The absence of a natural water supply on most hillforts is often raised as an objection to their suitability for settlement. There is little doubt that in most cases collected rainfall must have been supplemented by water carried to the site from springs or streams elsewhere. At Breiddin, Powys,



**Figure 98** Danebury, Hampshire. A: Ground plans of the hillfort in the sixth century BC (early) and the fourth century BC (late); B: Section through the main defences of the fort showing successive phases of rampart construction; C: intercutting storage pits inside the fort. [After Cunliffe 1983, figs. 29–31; photographs courtesy of Barry Cunliffe. Copyright reserved]

a square pond inside the defences may have acted as the main reservoir, while at other sites clay-lined pits have been interpreted as water containers. Collecting water and carrying it for long distances is not considered a problem by many communities living in Africa or Asia today, and presumably this was also the case during prehistoric times in Britain.

Determining the economy of the developed hillforts is not easy, and it was not necessarily the same throughout the zone. The idea that hillforts were only occupied in times of trouble finds a little support in work by Paul Buckland on insect remains from the pond inside the Breiddin, Powys, which he interprets as showing intermittent and low-intensity usage. Further south the picture is rather different as the evidence already discussed from Danebury, Hampshire, clearly shows. But whether the occupants of hillforts went out to farm the adjacent land, or were in some senses specialists relying on food produced elsewhere and only stored and consumed on the hillfort, is far from clear. Although many thousands of animal bones have been recovered from hillfort sites, interpreting the patterns is not easy. Difficulties of comparing the Wessex sites with those in the Welsh Marches are compounded by the fact that acid soils in the west have robbed us of the animal bones. At the risk of over-generalization, the pattern now emerging is one of a mixed economy throughout the Southern Hillfort Zone, perhaps with slight variations in the relative importance of pasture as against arable between areas. Celtic fields are associated with individual hillforts as far apart as the Sussex chalklands and the central Welsh Marches. Querns, grain storage facilities, and evidence of animal herding and processing animal products are universal. At Danebury, Hampshire, cattle represented by 17 per cent of the animal remains in pits were important as the producers of consumable protein in the form of meat and milk. Pig at 13 per cent represents an important source of protein and fat, while sheep at 61 per cent were valued for their meat and for their wool as a significant contribution to the exchangeable surpluses available to these communities. Horse and dog were also represented, but nothing suggesting the exploitation of wide resources. Spelt wheat and six-row barley were grown, and a wide range of agricultural implements are known from excavations at hillforts. The balance between animal and plant food sources is always too hard to gauge, but analysis by Mandy Jay and Mike Richards of stable isotopes from human and animal remains at sites throughout the Southern Hillfort Zone and beyond shows a high level of animal protein in the diet of these people with little indication of contributions from marine resources even among those living near the coast.

The overall function and role of developed hillforts has been a matter of some debate in recent years, especially their defensive capabilities and role in warfare. Mark Bowden and Dave McOmish writing in the mid 1980s were among the first to downplay the military role of hillforts and suggest that they were essentially symbolic structures. This was a view embraced to varying degrees by others, and led to the 'pacification' of hillforts with attention shifted instead to the isolating effects of the ramparts and occupant communities representing their identity as enclosed and withdrawn. For most commentators, however, hillforts and war go together. Few would deny the symbolic significance of these places and their architecture, but they were, as Ian Armit emphasizes, essentially strongholds built at great social cost by communities who perceived a real need for defence. Critical to their understanding, however, is the recognition that

war takes many forms and may not have been enacted in prehistory as it has been in modern times. Rather, cattle-raiding, feuding between households or kin-groups, or single combat by champion-warriors may have been the kind of warfare involved here, and in this connection it is perhaps relevant that the gateways of many developed hillforts open onto relatively flat open areas that might at least occasionally have been theatres of battle. Reflecting on the role of Danebury at the end of the excavation programme, Barry Cunliffe considered the site a central place, the key attributes of which were a protected enclosure; a focus for some settled occupation; a social focus with well-defined and maintained boundaries; a religious focus with shrines; a place controlled by a central authority; a place for the storage of society's surplus products; and a centre for redistribution. But hillforts were not the only settlements in the Southern Hillfort Zone.

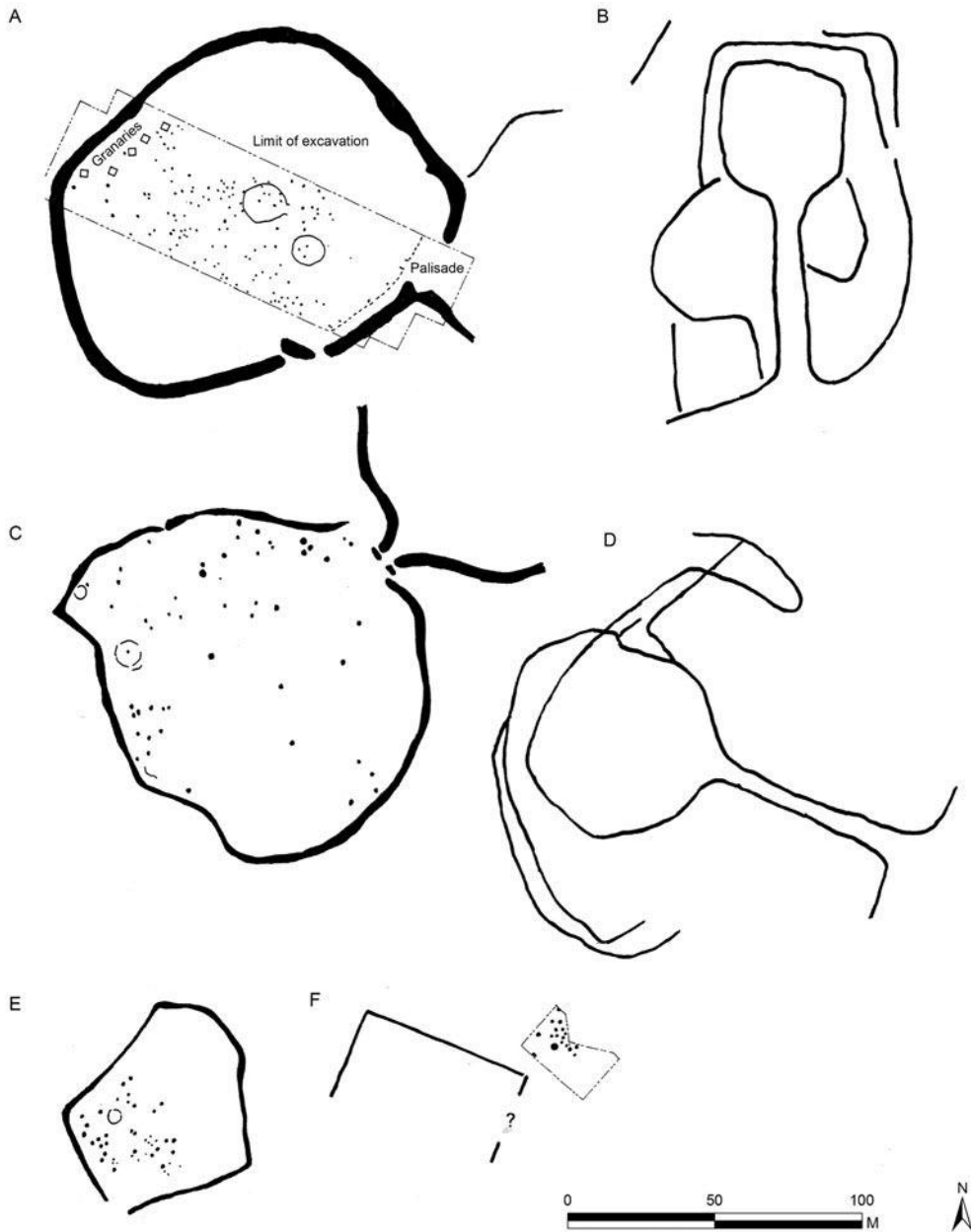
### ***Farmsteads and hamlets***

Scattered widely around the hillforts were various open settlements and smaller enclosures which range in size from single farmsteads to hamlets of perhaps five or six households (99). In Wessex, square, sub-rectangular, and rounded enclosures are known, often with one or more large round-houses as dwellings, workshops, and byres, with scatters of pits and four-posters round about for storage. Little Woodbury, Wiltshire is one such enclosure covering an area of about 1.6ha. Within the excavated portion were the postholes of a single roundhouse, and numerous pits and four-posters. Other structures probably lie in the unexcavated part of the site, but enough is known to be able to say that the occupants were engaged in mixed farming: cultivation of cereals and herding cattle and sheep. As on the hillforts, most enclosures show that activities were strictly ordered within the boundary earthwork.

One particularly distinctive type of settlement that appeared in the third century BC is the 'banjo' enclosure, so-called because of its banjo-shaped ground plan: a circular focal enclosure with two parallel projecting antenna-like ditches. It has been suggested that the design of these enclosures was to facilitate livestock management, for example herding cattle to be milked or sheltered into the enclosure. This might be so, but excavations at a number of sites in Wessex show that the occupants were involved in mixed farming rather than specifically pastoral farming. At Owslebury, Hampshire, excavations by John Collis revealed traces of fields around the banjo enclosure. Nearby, at Micheldever Wood, Hampshire, a banjo enclosure preserved under woodland excavated by Peter Fasham in advance of the construction of the M3 was found to cover 0.2ha, had an entrance facing west with an 85m long passage 4m wide, and was occupied by a small community whose economy focused on pigs, sheep, and wheat. More work is needed to establish the importance of these banjo enclosures relative to hillforts, but there are hints in the quality of finds recovered that some may be high-status settlements.

In North Wales, various circular stockyards with a central occupation area lie around the hillforts. Various types have been defined on morphological grounds by Christopher Smith, but accurate dating is lacking, and it is not certain that all belong to this period.





**Figure 99** Ground plans of farmsteads and settlements in the Southern Hillfort Zone dating to between the fifth and second centuries BC. Pits, postholes, and ditches shown in solid black. A: Little Woodbury, Wiltshire; B: Upper Camborne, Hampshire; C: Phase 2, Gussage All Saints, Dorset; D: Preshaw House, Hampshire; E: Tollard Royal, Wiltshire; F: Guiting Power, Gloucestershire. [After Bersu 1940, fig. 1 and plate 1; Cunliffe 2004, figs. 12.2 and 12.5; Wainwright 1979, fig. 17; Wainwright 1968, fig. 3; Saville 1979, figs. 2 and 12]

As already noted, Celtic fields were founded, or reused from earlier times, across much of the Southern Hillfort Zone. A light ard pulled by oxen was one of the tools used in tillage, and iron shares have been found at Danebury and several other sites. As an illustration of the spread of farming at this time mention may be made of the cultivation marks of this period at the base of heavy clayey soils found at Almonsbury, South Gloucestershire, during the construction of the M5 motorway.

The pattern of development within the farmsteads and hamlets across the Southern Hillfort Zone is far from consistent. In contrast to the sites already mentioned some were not bounded by enclosures until the second century or later, while others start as an enclosure but later become open sites. Winnall Down, Hampshire, is a case of this last-mentioned trend. Occupation during the sixth to third centuries BC was confined to a D-shaped enclosure of about 0.4ha. There was an elaborate gateway, houses, pits, and the ubiquitous four- and six-posters. From the third century BC, however, the enclosure was abandoned and an open settlement occupied the same area by this time comprising roundhouses set within circular gullies, pits, a rectangular structure, and four-posters. Cattle were the main source of animal food, milk, and meat in this later phase, but sheep were common, presumably for their wool.

Activities were not necessarily confined to the inside of enclosures where they exist. At Guiting Power, Gloucestershire, the focus of the site was a rectangular enclosure approximately 60m by 40m with an entrance opening to the east. Within the enclosure were abundant traces of occupation, including rock-cut pits and postholes. The entrance was protected by a timber gateway, yet outside to the north was a cluster of 18 rock-cut storage pits. Sheep were the most numerous animal represented by bones from the pits, but cattle were probably more important in the diet of the inhabitants.

In the major lowland areas within the Southern Hillfort Zone, for example the Severn Valley, large multiple-enclosures of village-like proportions are known as well as the smaller hamlet- and farmstead-sized units already mentioned. At Beckford, Worcestershire, for example a series of ditched enclosures, each containing roundhouses, storage pits, and smaller compounds, have been revealed by excavation. Each enclosure defined an area within the overall settlement, which in total covered several hectares, and each seems to have been individually owned and occupied for a long period.

At some non-hillfort sites there is evidence for specialization of production, or at least a focus on specific resources. Frank Green has found that regional variations in the types of crops grown can be detected in Wessex. In the eastern Cotswolds, Richard Hingley has identified variations in the form and layout of settlements which led him to postulate mainly arable-based economies associated with a high density of open settlements along the river valleys in contrast to spatially isolated enclosed settlements whose occupants pursued a pastoralist economy on the surrounding higher ground. Differences in the social organization of the communities living in these two areas may also be suspected, and many other cases of similarly localized variations undoubtedly await discovery through research and excavation.

Craft production too may be seen as a part-time occupation for farmers living on some sites.

Weaving is frequently represented by weights and combs, while metalworking was carried out at some sites. At Gussage All Saints, Dorset, both ironworking and bronzeworking took place on a considerable scale during the second century BC, focusing on the manufacture of horse harness and cart/wagon fittings.

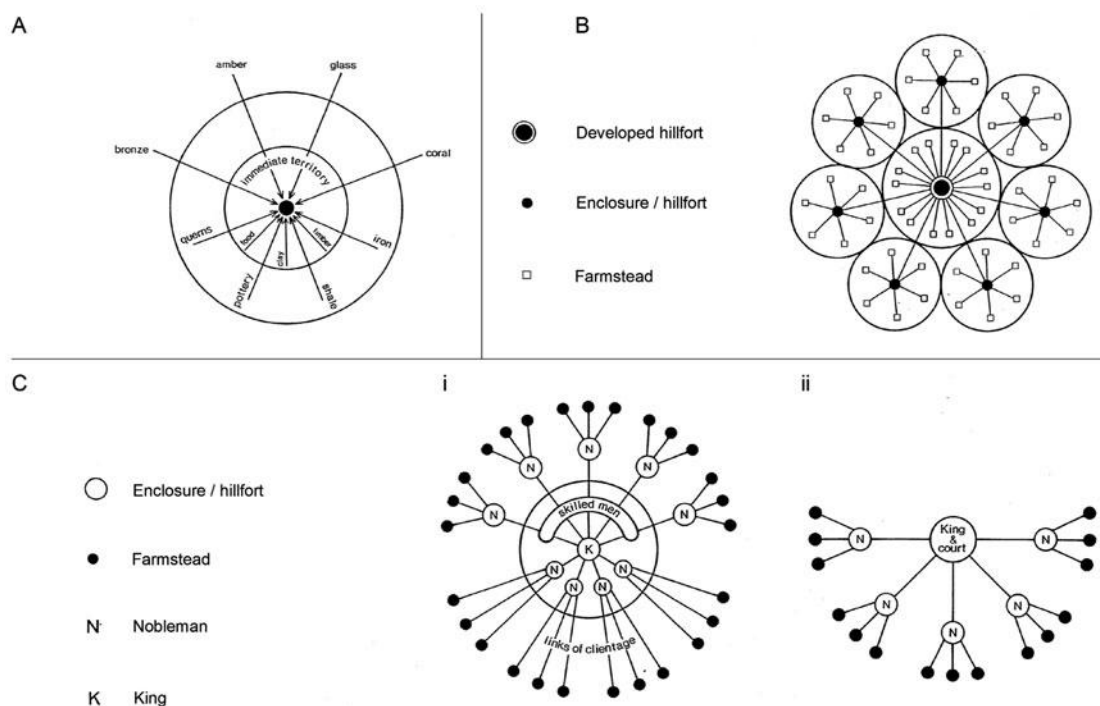
### ***Landscape patterns, settlement systems, and social structure***

Placing the hillforts and other settlements into a coherent physical and social pattern is not easy, although various models have been proposed. By the third century BC the landscape was dominated by developed hillforts as village-sized settlements, around which were smaller settlement units, either open or enclosed. All include roundhouses as residential units and the building-blocks of social organization. Fieldsurvey and sample excavations around Danebury, Hampshire, and Maiden Castle, Dorset, suggest that when the hillforts were at their peak many of the surrounding settlements were abandoned, thus raising the possibility of shifting residence patterns as a result of short-term political or economic circumstances. Hillforts as central places in the sense spoken of by geographers have been widely debated, but unless it can be shown that non-hillfort settlements were free to attach themselves to any hillfort (for whatever reasons) such models are quite inappropriate. More likely is a pattern where settlements and the lands they represent were attached to a central hillfort by formal and long-lasting ties of some sort, perhaps kinship, patronage, or alliances. Henry Gent has demonstrated that the developed hillforts had a proportionally greater storage capacity than non-hillfort sites, and it seems likely that the hillforts acted as centralized storage points of some kind. Analysis of the carbonized cereal remains from Danebury by Martin Jones shows that crops were brought to the site from a number of different environments, although exactly whose crops and from where could not of course be determined.

Hillforts in this zone were more than simply fortified villages and defended food stores. As already noted, the enormous communal labour required for their construction and their ostentatious form suggests that they were, at the very least, symbolic centres of power for a community that were also ritual foci, places for exchange, workplaces for craftsmen, and possibly centres for the redistribution of food and goods taken in from smaller settlements round about or acquired through raids. J D Hill has also suggested that the enclosing earthworks marked significant social discontinuities whereby the interior was somehow different, and the activities undertaken there separate, from the expected social norms in the surrounding landscape.

Developed hillforts were well spaced within reasonably well-defined territories, and they were maintained, repaired, and periodically remodelled by powerful authorities able to order reserves of manpower. The coercive power implicit both in the ordered layout of buildings and in the monumentally planned and executed defences, together with a role in redistribution, suggests the centralized power of a chiefdom where cycles of exchange were controlled by an elite. Whether the heads of such societies actually lived in the hillforts is quite another matter. It is tempting to suggest that they did simply because of the scale of the sites. Barry Cunliffe proposed two

possible models for Danebury (100C). In the first the chief or king, the nobility as heads of kinship groups holding the surrounding farms, and some or all of the skilled craftsmen lived in the hillfort. In the second only the chief and his court or entourage lived in the hillfort while the nobility lived in other settlements round about, perhaps with yet another tier of site representing farm units below them. Choosing between these two is quite impossible given present evidence, but other possibilities must also be considered. As John Collis has pointed out, there is in fact very little evidence for the presence of wealthy people in hillforts, and it may be that the occupants were simply administrators looking after the various activities that took place there. Common to all these proposals is the fact that the social and religious systems of communities involved were intimately bound up with the productive capacity of their local environment, and even within the Southern Hillfort Zone there were many variations in resource potential so that each polity had a distinctive character.



**Figure 100** Simplified models of economic, spatial, and social relationships between developed hillforts and surrounding settlements. A: Economic relationships of a developed hillfort in terms of the materials and goods brought to the site from near and far. B: Spatial model of developed hillfort and contemporary settlements in the vicinity. C: Two possible alternative models of social order in developed hillforts and nearby settlements. [After Cunliffe 1984, figs. 10.3, 10.4 and 10.5 with minor changes]

## OPEN SETTLEMENT ZONE

This region broadly covers East Anglia, the east Midlands, central England north of the Thames, Lincolnshire, and Humberside. Hillforts are rare, either early or late in the sequence, and tend to lie around the periphery of this zone on the higher ground of the Chilterns and the Northamptonshire uplands. As a whole the Open Settlement Zone shows continuous progressive change between 600 BC and 100 BC with increasing movement onto poorer soils, and, after 200 BC, the appearance of enclosures of various sorts on the boundaries of the most productive land.

Linear earthworks, for the most part ploughed-out in more recent times, have been recorded across this region, including a group on the Chilterns extending into Cambridgeshire as far as the Devil's Ditch at Newmarket, Suffolk. Some show considerable complexity, with pit alignments being replaced by simple earthworks that in turn have double or triple ditches in their final phase. Pit alignments are also widespread and David Knight was able to list 85 examples from Bedfordshire, Buckingham, Cambridgeshire, and Northamptonshire in 1984. Fairly typical is Meadow Lane in St Ives, Cambridgeshire, where two parallel lines were found, one with round pits to the west and the other with rectangular pits to the east (101). Both had been built across



**Figure 101** Double pit-alignment under excavation at Meadow Lane, St Ives, Cambridgeshire. [Photograph courtesy of Joshua Pollard]

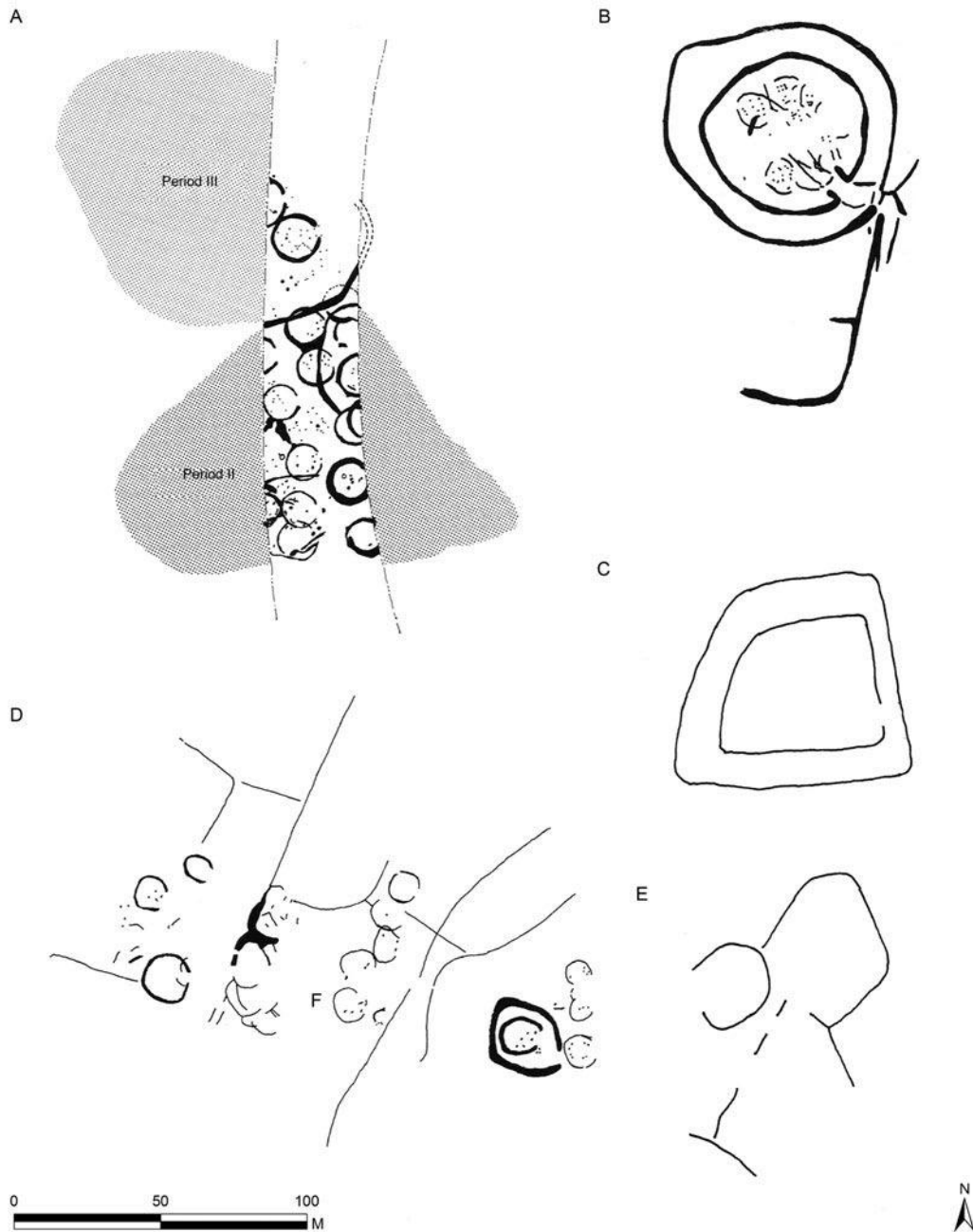
an essentially grassland landscape, the eastern alignment around 770–410 BC (Beta-77757: 2460±60 BP).

Settlement was dominated by villages, hamlets, and farmsteads. Some were open all their life, some enclosed throughout their existence, and some started out open but were enclosed in later phases (102). Many of the ditches forming the enclosures were more for drainage than defence, and it might be better to call them compounds rather than enclosures. The majority are known through aerial photography as cropmarks, but a fair number have been excavated in recent years as a result of commercial archaeology. At Little Waltham, near Chelmsford, Essex, the settlement began as an open cluster of roundhouses in the mid third century, most surrounded by drainage gullies. Because the site lies on a floodplain, four-posters were preferred to pits for storing grain. In the later second century BC the site was remodelled with the construction of a defensive palisade enclosure within which there were again several roundhouses. A similar village-like settlement has been found at Fengate, Peterborough, where over 60 houses were investigated (103A), although not all were in use at any one time and less than half were used for human habitation; the majority were storage structures and byres. The site lies on the edge of the Fens as they were during the late first millennium BC, and the mainstay of the economy was grazing cattle and sheep on the rich fen-edge pastures. Cereals were not produced locally, but may have been imported. Fishing and fowling provided a supplement to the diet. Overall, this settlement may have been occupied by 25 to 30 people.

Deeper into the Fens at Delph near Haddenham, Cambridgeshire, three sub-square compounds and a possible shrine lay beside a main field axis the boundary of which marks off the wetland proper from the higher and drier ground. The largest enclosure, Site V, was preceded by a small-scale open settlement and it was suggested by excavators Christopher Evans and Ian Hodder that this relates to the changing economic and social role of the site. Initially it was used by transhumant communities living for part of the year on the dry land but later they established year-round occupation, grazing cattle and sheep on the edge of the wetland which necessitated a drainage ditch around the settlement during the winter.

In the Thames Estuary at Mucking, Thurrock, excavations by Margaret Jones revealed another extensive spread of over 100 houses represented by circular gullies ranging from 6m to over 20m in diameter. These clearly related to a long period of settlement spanning the period from the fifth century BC to the first century AD. Associated with some houses were compounds and pits. The economy of this settlement seems to have depended on grazing sheep. Higher up the Thames Valley at Ashville near Abingdon, Oxfordshire, the main period of occupation is represented by 18 house gullies, of which perhaps seven were in use at any one time. Mixed farming was practised here, including the cultivation of hulled six-row barley, spelt, and lesser amounts of emmer wheat and club wheat. The cultivation cycle included planting winter wheat, and analysis of the seed remains by Martin Jones suggests that parts of the nearby low-lying damp ground had been brought into cultivation because spike rush (*Eleocharis palustris*) was represented among the cereals.

Smaller settlements are known across the zone. In the Thames Valley at Mount Farm near Berinsfield, Oxfordshire, excavations revealed a small farm with a group of fields, while nearby



**Figure 102** Ground plans of enclosed and unenclosed fourth to second century settlements in the Open Settlement Zone. A: Little Waltham, Essex; B: Minges Ditches, Oxfordshire; C: Dun's Tew, Oxfordshire; D: Enstone, Oxfordshire; E: Claydon Pike, Gloucestershire. [After Dury 1978, fig. 4; Cunliffe and Miles (eds) 1984, figs. 4.3, 4.4 and 4.7]



**Figure 103** Late first millennium BC settlements in the Thames Valley and eastern England. A: Aerial view of excavations at the Catswater site Fengate, Cambridgeshire, showing roundhouses and enclosures; B: Aerial view of excavations at Gravelly Guy, Oxfordshire, showing a linear scatter of storage pits along a narrow strip of land between major boundaries. [Photographs courtesy of (A) Stephen Upex (Nene Valley Research Committee) and (B) George Lambrick (Oxfordshire Archaeological Unit). Copyright reserved]



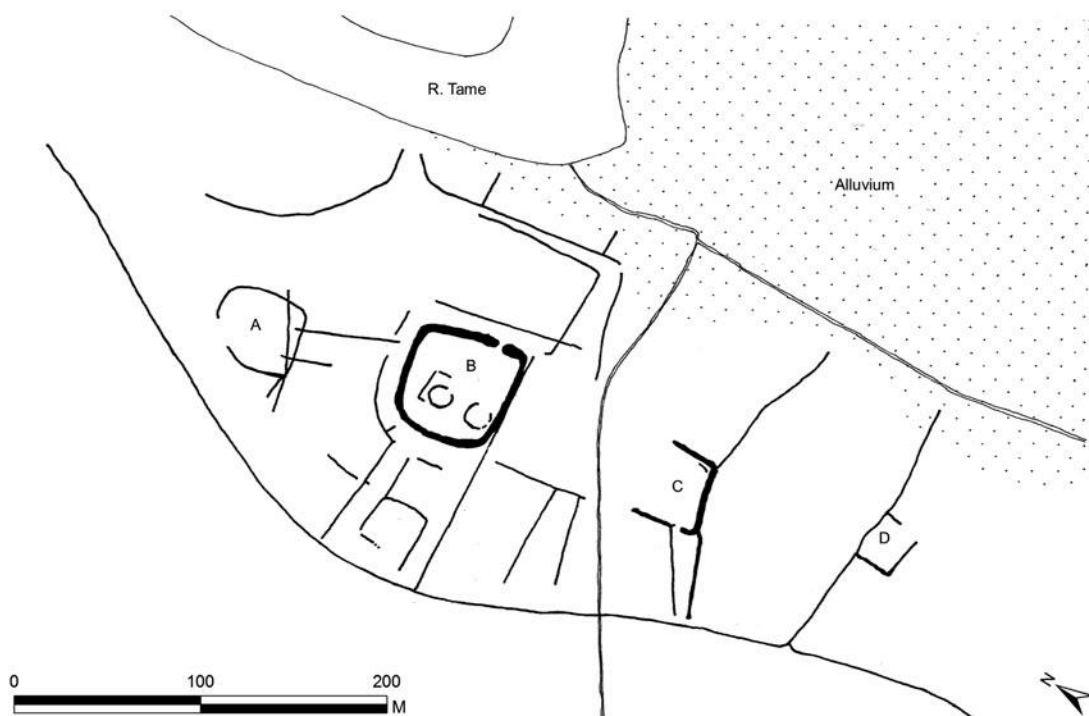
at Mingies Ditches a double circular enclosure with antenna ditches flanking the entrance, and roundhouses and four-posters in the interior, has been investigated. The double enclosure may have provided a stockyard between the ditches. At Farmoor on the Thames flood plain near Stanton Harcourt, Oxfordshire, a seasonal settlement connected with exploitation of the rich riverside pasture was revealed during excavations in 1976. Roundhouses and stockyards were present, but, in contrast to the other sites mentioned above, no trace of cereal production in the vicinity was found. Many of these small sites include storage facilities in the form of pits and four-posters, but grain may not always have been stored at settlements. Excavations at Gravelly Guy, Oxfordshire, revealed a dense linear scatter of storage pits which the excavator, George Lambrick, suggests had been dug in a narrow strip of land between two fieldsystems (103B) to act as grain stores near to where crops were harvested. Curiously, they coincide with an earlier ritual boundary marked by barrows dating back to the early second millennium BC and may be a case where seed-corn is committed to the protection of the ancestors.

Wild plants and animals did feature strongly in the diet of these farming communities, but fish bones are rare even on riverside sites. One interesting sidelight on the economy of the later first millennium BC is provided by the discovery of the head of a worker bee (*Apis mellifera* L.) preserved in peat dated to about 400 BC at Mingies Ditch, Oxfordshire. It is the earliest known find of a honey-bee in Britain so far, and its implications for the availability of beeswax and honey are considerable.

In the Trent Valley of Staffordshire and Nottinghamshire settlement along the river terraces and on the floodplain during the later first millennium BC was just as dense as along the Thames Valley. Excavations at Fisherwick beside the River Tame in Staffordshire revealed intensive use of this part of the environment. Enclosed homesteads and perhaps unenclosed roundhouses were relatively evenly scattered along the gravel terraces, each surrounded by a group of hedged and ditched fields (104). Some of these had been cultivated annually. The settlements, as elsewhere, were connected by ditched and hedged trackways, while similar tracks led to areas of open grazing and woodland that lay beyond the enclosed fields. The main emphasis lay on cattle- and horse-rearing, but arable cultivation was also important for both domestic use and fodder.

The dense scatter of sites already described continues across the east and north Midlands. Research by David Knight has demonstrated that in Northamptonshire and surrounding areas settlement sites mainly comprise homes to single family units, farmsteads which variously engaged in craft production and exchange among themselves as well as food production.

Further north, large-scale excavations in advance of gravel quarrying at Garton Slack and Wetwang Slack, East Riding of Yorkshire, illustrate the high density of settlement in this part of the Yorkshire Wolds. At Wetwang over 80 roundhouses have been found together with four-posters and pits for grain storage. Nearby was a major cemetery (see below), and tracks and lanes were found linking other nearby sites and providing access to fields. Each hamlet or village may have been occupied by anything from about 35 to 85 individuals. As in other parts of the Open Settlement Zone, settlements here tended to become more nucleated through time, and the provision of enclosure ditches was also favoured from the second century onwards.



**Figure 104** Ground plan of the settlements and fieldsystems at Fisherwick, Staffordshire, based on evidence recorded during excavations and from aerial photographs. [After Smith 1979, fig. 4]

Taken as a whole, the evidence from the Open Settlement Zone suggests some kind of hierarchy, with larger villages and major enclosed settlements forming nodes in a system that also included smaller farmsteads, some with specialized functions.

### ENCLOSED HOMESTEAD ZONE

This area covers North Yorkshire, Durham, Northumberland, and the northern uplands extending across the Pennines into Cumbria and Lancashire. West of the Pennines linear earthworks and pit alignments are scarce, but to the east they are fairly common and in places well-preserved either as cross-ridge dykes parcelling up promontories or long-distance earthworks dividing up plateau-land or river valleys. One of the best preserved is the Cleve Dyke on the Hambleton Hills of North Yorkshire where earlier barrow cemeteries seem to have been used as setting-out points. For the Yorkshire Wolds careful plotting of aerial photographs by Catherine Stoertz has revealed a predominantly south-west to north-east trend to the orientation of the linear boundaries which often run along the watersheds between drainage systems. Pit alignments are also well

represented east of the Pennines on both high and low ground. A few hillforts dating mainly to the sixth and fifth centuries BC are known on the Pennines and upland peripheries in Northumberland, but for most of the period from 600 BC down to 100 BC the majority of settlements were enclosed homesteads of various sorts. As elsewhere, there is a general tendency for later sites to be defended.



**Figure 105** Central area of the enclosed settlement at Thorpe Thewles, East Riding of Yorkshire, under excavation. Pits, postholes, gullies and the foundations of a large roundhouse can be seen partly cleared. [Photograph courtesy of the Cleveland County Archaeology Section. Copyright reserved]

### ***East of the Pennines***

Palisaded enclosures of the type established in the earlier first millennium BC continued to be used and new examples built. One of the most southerly is at Staple Howe, North Yorkshire, where an oval enclosure protected a simple roundhouse built in the sixth century BC if not earlier. It continued with various modifications down to at least the second century BC. Cattle, sheep, and pigs were kept, and wheat was cultivated by the inhabitants. Off the higher ground at Thorpe Thewles, Stockton-on-Tees, a sub-rectangular enclosure built about 200 BC provides a glimpse of valley settlements in this area (105). A well-built roundhouse with a drainage gully 19m in diameter lay within the enclosure. The ramparts would have provided defence against wolves and wild animals, and the site probably served as a stockyard as well as a settlement. This site provides an exception to the general trend for increasing defence later in the period because in subsequent phases the enclosure ditch was abandoned and a small nucleated settlement of several houses developed. Open settlements were also identified by Stoertz's work on the Yorkshire Wolds.

In Northumberland, and northwards into Scottish Borders, palisaded enclosures were the norm. Many examples are known, largely through surveys and excavations by George Jobey. Most enclosures seem to have been for pastoral use. At White Hill, Scottish Borders, two concentric palisades set between 6m and 15m apart provided a stockyard in a manner well represented at multiple-enclosures elsewhere in Britain. The size of these enclosures varies considerably from just one roundhouse to perhaps seven or eight in any one phase of occupation. Colin Burgess has suggested that population levels varied considerably too, ranging from 40 to 100 people per settlement. There is a general tendency, as for example at Fenton Hill and Huckhoe, Northumberland, for palisaded enclosures to be replaced by stone ramparts, often timber revetted, although this is not a universal pattern. Sites which had ramparts added look very much like small hillforts, but being less than 1ha they are better described as defended homesteads. In the fourth century BC there is some evidence for expansion into the uplands again, especially on the North York Moors, and to a lesser extent on the Cheviots, where environmental evidence points to renewed episodes of clearance.

### ***The Pennines and westwards***

On the Pennines and across the north-western part of the region, dating evidence for known sites is very poor. The most common settlement comprises a fairly self-contained unit with a set of small fields attached to a central walled enclosure containing a stone-built roundhouse. Many have been recognized in the upper Eden Valley, and Arthur Raistrick working in the Wharfedale area of North Yorkshire has shown how they cluster along the main river valleys leading into the uplands, many surviving as relic landscapes among the more modern field patterns. Transhumance may have been a feature of the farming system of these areas, but at Grassington,

North Yorkshire, and several other sites, nucleated settlements associated with fairly extensive fieldsystems are present from the second century BC. Hillforts are few in the north Pennines, the most notable example being at Ingleborough, North Yorkshire, where the stone ramparts protected more than 20 roundhouses. Cave sites are also occupied in these areas, presumably on a seasonal basis.

On the coastal plain of Cumbria aerial photography has revealed numerous open and enclosed settlements, although dating is uncertain as few have been excavated.

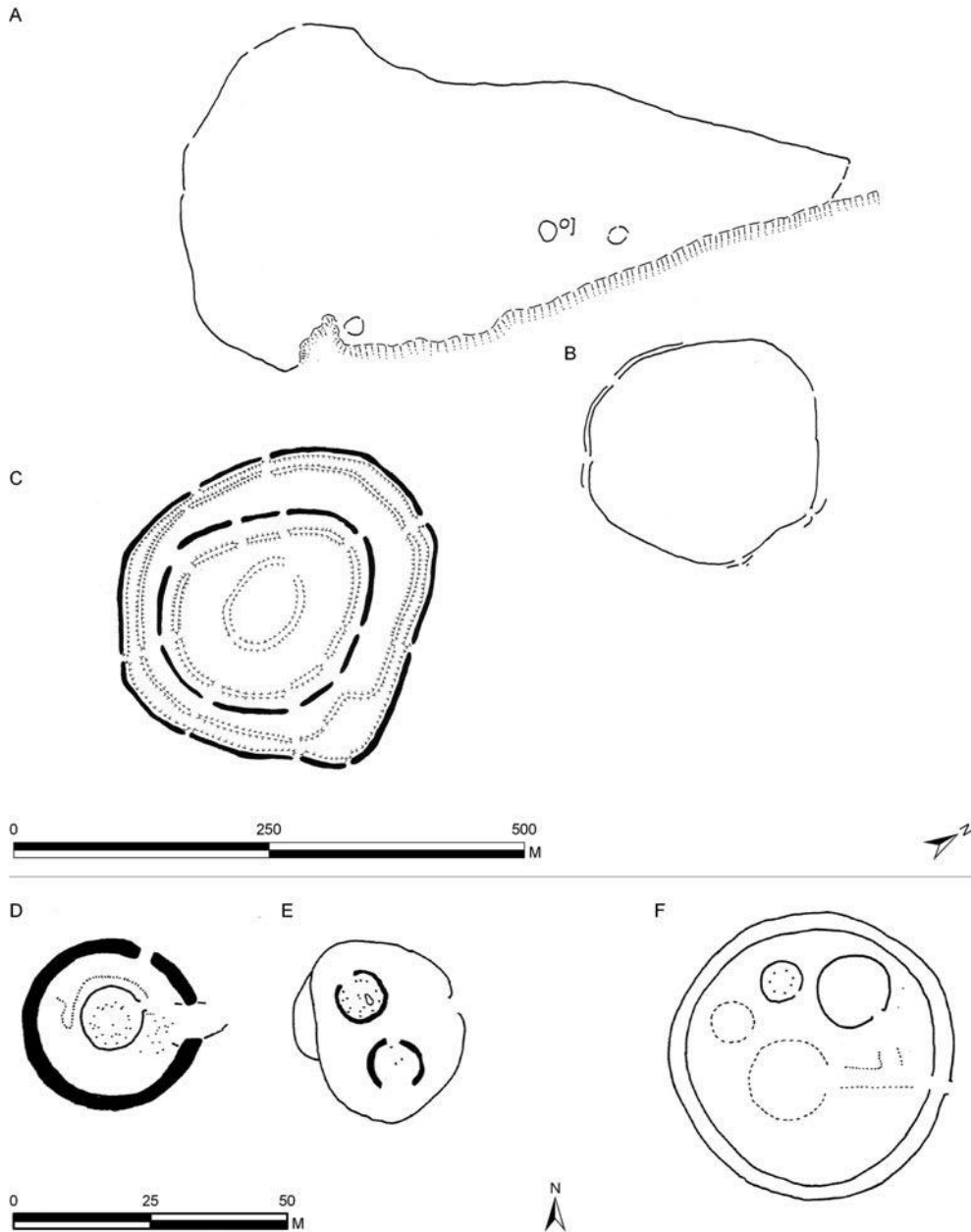
## NORTHERN HILLFORT ZONE

In the northern part of the Tyne-Forth province, in north Northumberland, Scottish Borders, Lothian, and westwards into Dumfries and Galloway and the Isle of Man, a pattern of settlement rather similar to that of southern England and the Welsh Marches is represented. Linear boundaries and pit alignment are not common. Hillforts of various kinds dominate the settlement pattern with more than 1,000 examples recorded in the region (106), some with associated fieldsystems.

Hillforts were built in this zone from the late eighth century BC. Known as Abernethy style hillforts, and showing strong similarities with central European forts of the same period, they are characteristically oblong in plan with ramparts that comprise an earth and rubble core faced inside and out with drystone walling and bound together with horizontal rows of timbers which projected through one or both faces. Ditches were rarely dug at these sites. At both Finavon and Monifieth, Angus, early forts continued in use through much of the later first millennium BC. More than 60 of these timber-laced ramparts show signs of having been set on fire, with the result that the ramparts have become vitrified. Whether this was deliberate to produce a more solid rampart, or the result of attacks, is unclear.

A few hillforts in eastern Scotland attained considerable size and were densely occupied. At Eildon Hill North, Scottish Borders, it is estimated that over 500 roundhouses lay within the enclosed area of 16.2ha. Further south at Yeavinger Bell, Northumberland, there are about 130 houses in a fort of 5.3ha. Excavations at Traprain Law, East Lothian, revealed a long and complicated sequence of changes and enlargements from an enclosure of 4ha on the summit to a defended site covering four times that extent at its peak. At Kaimes Hill, Edinburgh, a double rampart hillfort overlooking the Firth of Forth was built about 400 BC with a timber-laced rampart and numerous stone roundhouses inside.

Multivallate hillforts, sometimes known as causewayed forts because of their multiple entrances, are known in the east of the Northern Hillfort Zone, including Barmekin of Echt, Aberdeenshire, and White Caterthun, Angus. At Brown Caterthun, Angus, excavations in the mid 1990s showed that use of the site spanned much of the later first millennium BC, during which time the number of entrances was reduced from five to two. The ramparts were built in a number of different styles including palisades, boulder-faced walls, timber-laced rubble, and glacis style with an external quarry ditch. Dennis Harding suggests that with their multiple entrances these sites can



**Figure 106** Ground plans of hillforts and palisaded enclosures of sixth to second century BC date in the Northern Hillfort Zone. A: Traprain Law, East Lothian; B: Eildon Hill, Scottish Borders; C: The Brown Caterthun, Angus; D: West Plean, Stirling; E: Glenachan Rig, Scottish Borders; F: High Knowles, Northumberland. [After Feachem 1966 figs. 14, 15 and 10; Cunliffe 2004, fig. 14.7]

hardly be regarded as defensive and their structure may instead connote the ordering of access for communal activities perhaps involving festive, legal, inaugural, and ceremonial activities.

Coastal promontory forts are known on both east and west sides of the region, one of the earliest being at Castle Point near Troup, Aberdeenshire, where a palisade was built across the landward neck of a promontory in the mid first millennium BC. Domestic and industrial remains were found within the site.

Palisaded enclosures are also known in this region, some reaching a size that makes them comparable to hillforts. At Braidwood, Midlothian, for example, a palisaded enclosure was succeeded by an earthwork surrounding a village of more than ten roundhouses.

Ring-ditch houses represented archaeologically as a penannular or segmented ditch – probably for drainage – around a post-framed roundhouse that might sometimes be of two storeys are widely scattered through the region, often in unenclosed clusters. At Douglasmuir in the Lunan Valley, Angus, six houses ranging in size from 10m to 13m across were excavated. No animal bones were preserved, but the presence of quernstone fragments and six-poster granaries suggests grain cultivation and consumption.

In the Isle of Man, the dominant hill of South Barrule is topped by a hillfort with two roughly concentric walls 30m apart enclosing the foundations of more than 80 roundhouses. In plan the site bears comparison with the hillforts of Haughey's Fort (Co. Armagh), and Rathgall (Co. Wicklow), Ireland, suggesting cultural affinities westwards rather than northwards. A smaller, more British-looking hillfort is represented at Cronk Sumark in the north of the Island, while at Skibrick Hill, a multi-ditched enclosure dated to the period 700–400 BC has some similarities with the causewayed forts of southern Scotland (3). More than 20 promontory forts are known around the coast, but few have been adequately dated.

Despite rather patchy evidence it is clear that the economic base of communities living in this region was diverse. Pastoralism was probably widespread and made use of extensive grazing and transhumance opportunities offered on the higher ground. Cultivation was also important, and it is interesting to see the garden-sized plots around sites such as Hut Knowe, Scottish Borders, perhaps representing 'in-fields' close to the settlement with 'out-field' grazing land beyond. Whether a two-tier hierarchy of small homesteads and large hillforts related to the kind of stratified social organization seen in the Southern Hillfort Zone operated in the north as well remains to be seen, but Paul Frodsham and others have argued that in the Cheviots there were periodic style-wars involving architectural expressions of identity projected through hillfort design, something that may have been more significant in the construction of these sites than simple defence against truculent neighbours.

## **FORTIFIED HOMESTEAD ZONE**

This area comprises Devon and Cornwall, west Wales, and all of northern and western Scotland. Surprisingly for such a large area the kinds of settlements, and the pattern of events, represented

is remarkably similar throughout, although some local types can be recognized. There are few large hillforts except on the eastern edges of the area. Most of the known settlements comprise small units, probably residences for single extended family groups. Many were fortified to varying degrees, although as a general rule sites became increasingly heavily defended as time went by (107). The visible regional and typological variations probably owe much to specialized economic functions and local traditions.

### ***South-western England***

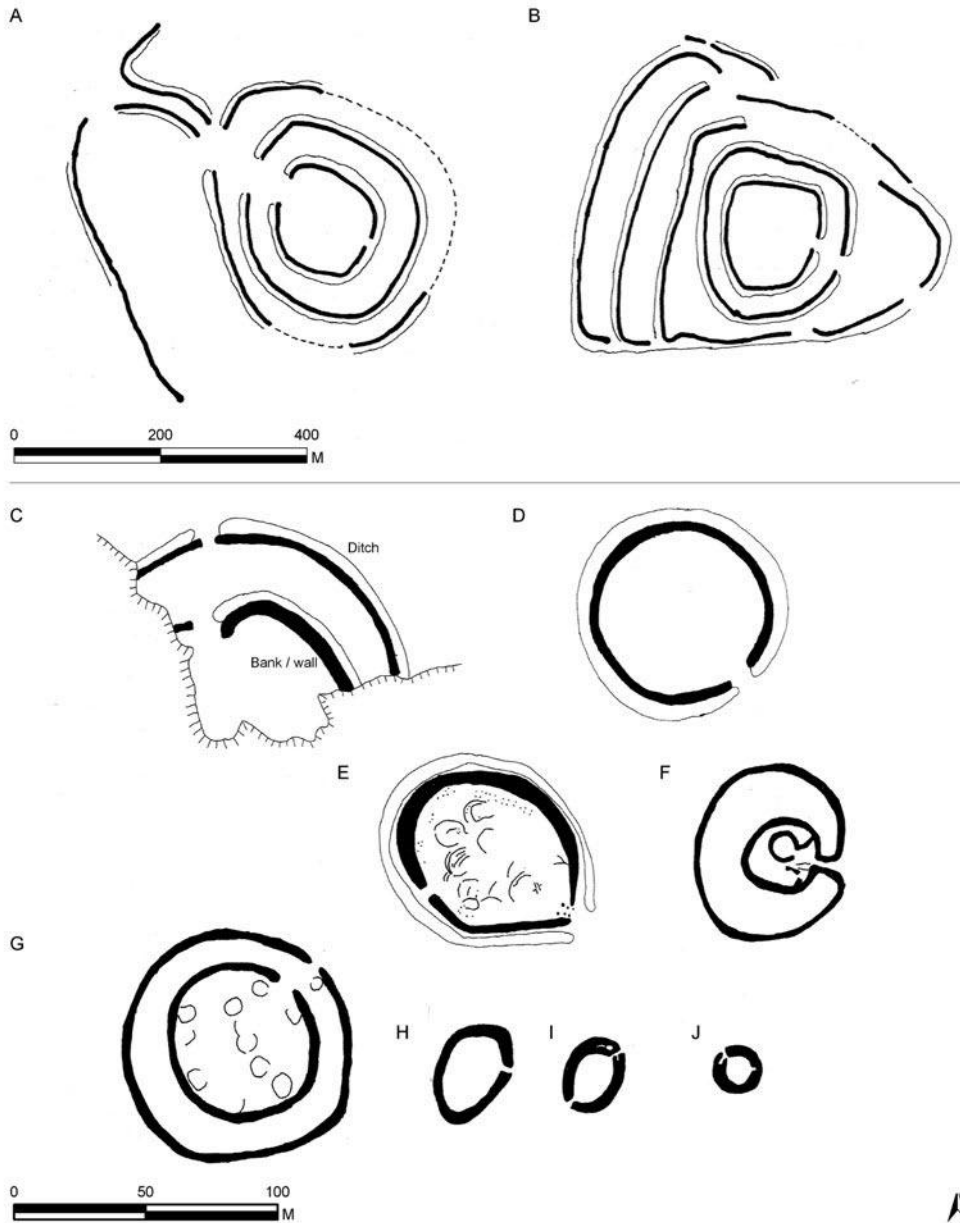
In south-western England, a few settlements, such as Foales Arishes and Kestor on Dartmoor, Devon, and Bodrifty on Mulfra Hill near Penzance, Cornwall, date to the seventh century BC and are comparable to open-plan settlements of the earlier first millennium BC in the area: houses scattered among cultivation plots. In general such arrangements were replaced after about 500 BC by other forms of settlement. Of these, rounds are possibly the most common type in Cornwall: small circular and sub-circular enclosures usually containing a few houses built against a strong enclosure wall or bank. They are mostly found in hilly country on good agricultural land, and are usually under 0.8ha in extent. Few examples have been excavated, but at Trevisker, Cornwall, a round occupied in the second century BC yielded quernstones and a possible iron sickle which suggest involvement with agriculture. One of the houses also contained a slab-lined drain indicating its use as a byre.

Complementing the rounds, and widely spread across Devon and Cornwall, are multiple-enclosure forts. Characteristically these are sited on hillslopes, and comprise an inner enclosure, usually less than 1.5ha in area, with a single entrance and massive ramparts, around which are concentric earthworks providing stockyards integral with the central occupation area. At Milber Down, Devon, antenna ditches, like the banjo enclosures of Wessex, probably served to funnel animals into the pens or stockyards. The main entranceways to these enclosures are usually sited to give easy access to springs or water sources. Finds include relatively rich ornaments such as shale and glass beads, and implements of iron and bronze. These sites were clearly pastoral enclosures, and may have been occupied by relatively rich family groups.

The largest settlements in the area are cliff castles along the coast, usually set on spurs or promontories defended by a single or multiple rampart across the neck of the projection. Most are less than 2ha in area although with precipitous slopes on three sides the area available for settlement was often much less. At the Rumps near St Minver, Cornwall, the three ramparts evolved through several structural phases. Finds of sheep bones and spindle whorls suggest the importance of flocks, while clay ovens and querns attest use of cereals. Embury Beacon near Hartland, Devon, was found upon excavation to enclose several structures, and from the arrangement of ramparts it can be suggested that its function was similar to that of the multiple-enclosure forts.

Specialized sites of various sorts also occur in south-west England. Coastal sites, either seasonal or permanent, and reliant partly or wholly on the exploitation of marine resources are





**Figure 107** Ground plans of enclosures and settlements in the Fortified Homestead Zone of Atlantic Britain. A: Milber Down, Devon; B: Clovelly Dykes, Devon; C: The Knave, Rhossili, Swansea; D: Threemilestone Round, Cornwall; E: Walesland Rath, Pembrokeshire; F: Llwyn-du-Bach, Gwynedd; G: Castell Odo, Gwynedd; H: Ballycastle Dun, Angus and Bute; I: Leccamore Dun, Angus and Bute; J: Dun Lagandh, Highland. [After Cunliffe 2004, figs. 13.5, 13.7, 13.8, 13.14, 13.17 and 13.18]

relatively common, as at Porth Hallangy Down and Nornour, Isles of Scilly. In the Somerset Levels, trackways linking the dry islands continued to be built, while lake settlements, or at least marsh settlements, are known at Glastonbury and Meare. Controversy surrounds the interpretation of the evidence recovered by Arthur Bulleid and H St George Gray during their excavations at these two water-logged sites in the early years of the twentieth century. Differential desiccation of the encapsulating peat caused warping and stratigraphic dislocation which was not properly appreciated at the time, and while it seems clear that occupation took place at these sites, its extent and duration is uncertain. David Clarke has suggested that at Glastonbury many different types of structure lay within the settlement, including houses, ancillary buildings, workshops, work floors, storehouses, stables, byres, and kennels. These he proposed could be arranged into sectors, each sector being occupied by a single social unit, probably a kinship-based unit such as an extended family of perhaps 15 to 20 individuals. Overall, Clarke suggested that the population fluctuated between 65 and 100 people and among the main activities undertaken was the manufacture of glass beads.

Rather similar is Meare Village West, Somerset. Here excavations again revealed a number of house sites and evidence for various crafts. The site was permanently occupied, and Bryony Coles has suggested that it might have served as a periodic rural market or exchange centre for food and goods. But not all the settlements of this period in the Somerset Levels were permanently occupied; recent investigations at Meare Village East by John and Bryony Coles suggest seasonal occupation here. Exploitation of a relatively restricted range of resources is clear at all these sites and, as at Fengate, Peterborough, marshland grazing was undoubtedly a mainstay of the subsistence economy.

### ***West Wales***

In west Wales settlements similar to those in Devon and Cornwall are represented; a few hillforts on the scale of examples in the Southern Hillfort Zone are present west of the Marches, including Foel Trigarn, Pembrokeshire, and Pen Dinas near Aberystwyth, Ceredigion. Rathes, the Welsh equivalent of rounds, are widespread, and total excavation of Walesland Rath near Haverfordwest, Pembrokeshire, by Geoffrey Wainwright in 1967–8 gives a clear insight into the development of one such site. The enclosed area was oval in plan, about 64m by 49m, and defined by a bank and ditch with two opposed entranceways. Inside were at least three timber roundhouses and many postholes suggestive of other buildings both against the rampart and free-standing. There was evidence of bronzeworking, but little trace of subsistence pursuits.

Cliff castles and promontory forts are found along the coasts of Pembrokeshire, Carmarthenshire, and, to a lesser extent, around the Gower, Swansea. One of the few excavated examples is Coygan Camp, Carmarthenshire, where occupation was probably concentrated in the lee of the rampart. Among the objects recorded were a few personal ornaments, hide-dressing equipment, fragments of two quernstones, and various rubbing stones. Sling stones suggest

the need for a constant supply of missiles for defence. Cattle bones were the most numerous animal remains found, suggesting an economy based on stock-rearing. Arable cultivation was here probably of secondary importance.

Multiple-enclosure settlements comparable to the Cornish examples are also found widely across south Wales, as at Mynydd Bychan, Vale of Glamorgan. In the upper Severn Valley broadly similar sites have been recorded through aerial photography, and one at Collfryn, Powys, has been excavated to reveal four roughly concentric lines of enclosure ditches and intensive internal occupation including roundhouses from the fourth to first century BC. Unlike most enclosures in southern and central England, these sites apparently lack any associated fieldsystems and were thus presumably occupied by essentially pastoral communities. Caves were occasionally used for occupation, possibly seasonal, and often connected with the exploitation of coastal resources.

### ***Western and northern Scotland***

In western and northern Scotland many of the features now familiar from western areas again appear, although a local variant of the ubiquitous roundhouse comprises large, thick-walled, stone-built structures generically known as 'Atlantic roundhouses'. Specific elaborations include wheelhouses when the internal arrangement of space is radial and, in more complex forms, duns and brochs.

Promontory forts along the coast of Highland, the Orkney Islands, and the Shetland Islands are well known, and some such as Clickhimin, Shetland Islands, contain what are known as blockhouses. These have a rectangular ground plan, were several stories high, and were heavily built, with thick walls. A central passage on the ground floor gave access to accommodation on either side and to the floors above.

From the second century BC, or possibly earlier, distinctive settlements known as duns were constructed in western parts of Scotland. These were essentially developments of the Atlantic roundhouse comprising drystone walled enclosures, mostly less than 0.3ha internally, with a central residential component. The walls were high, perhaps 3m or so, and generally fairly thick. They seem to be the defended homesteads of small groups farming nearby land. Dennis Harding has emphasized the need to distinguish between *dun enclosures*, which bear many similarities to the raths and rounds of other areas and have an outer enclosure like a small fort around the central residential unit, and *dun houses* which are single fortified dwellings, possibly completely roofed over as a single structure.

In the Shetland Islands during the sixth century BC a distinctive kind of solid-based roundhouse began to be built. Known as brochs, these tower-like houses had thick hollow external walls and a central living space although much debate surrounds their exact origin and developmental sequence. One of the oldest is at Old Scatness where excavations by Steve Dockrill revealed a stone tower with an external diameter of 18m and walls about 4m thick. The main entrance

protected with double doors opened to the west and gave access via stairs to intra-mural galleries. Originally about 3m high, the broch stood at the centre of a ditched enclosure, which also protected a cluster of small roundhouses between the tower and the defences. Outside the enclosure were fields for the cultivation of cereals, and grazing land. Cattle were important to the economy and also indicators of the wealth accumulated by this local chieftain; the broch itself was a symbol of power and strength, the residence of an elite family group within an aggressive raiding society that in some ways mirrored the kinds of society found in the hillfort-dominated zones to the south.

Euan Mackie has shown that a roughly parallel development, albeit slightly later, took place in the Hebrides, perhaps through maritime contacts along the Atlantic seaways, as D-shaped semibrochs in easily defensible locations were elaborated and expanded during the third century BC to become brochs that are indistinguishable from those further north. However, as Mike Parker Pearson has shown, the brochs in the Western Isles were not the central focus of nucleated villages as they were in the Orkney Islands and Shetland Islands. Rather, brochs here were liminal to the settlement pattern and embodied hierarchical social relationships through differences in labour mobilization and occupant numbers compared with lesser settlements. In contrast, material culture expressed strong shared group identity across communities.

Others adopted the idea and symbolism of the broch. Far to the south a broch superseded a large timber-framed roundhouse at Fairy Knowe near Buchlyvie, Stirling, while the most southerly broch so far known is at Edinshall, Scottish Borders.

Open settlements of the seventh to third centuries BC are known in this region, as for example the single wheelhouse built into the ruined passage grave at Quanterness, Orkney Islands. Finds were few, but sheep, cattle, and pig were kept, and marine resources supplemented the diet. At Coileaggan An Udal on North Uist, Western Isles, three wheelhouses excavated in the mid 1990s show two sizes of construction, the larger with 11 piers and the smaller with 8. Bronzeworking took place here in a small house about 700 BC. In the Shetland Islands, cellular roundhouses predominate, as at Sumburgh Airport, Wiltrow, and Jarlshof. At Kilphedir on South Uist, Western Isles, excavations revealed a group of five roundhouses dating to the fifth century BC that were superseded in the second century BC by a more massive building with thick stone walls.

More than 400 lake settlements, or crannogs, have been recorded in south-west Scotland. Usually built near the edge of a loch, these sites consist of an artificial island composed of layers of brushwood and rubble revetted by vertical piles. The island was joined to the shore by a causeway. Occupation was usually confined to a single house. Perhaps the best-known example is on Milton Loch, Dumfries and Galloway. Dating to the fourth or fifth century BC, this site had a small jetty and harbour. The house was 12.8m in diameter, and was divided internally into several rooms. Another example at Oakbank, Loch Tay, Perth and Kinross (108), was the homestead of a small family of farmers living on the loch and cultivating land on the adjacent shore while also taking advantage of the fish and aquatic resources in the loch itself.



**Figure 108** Reconstruction at the Scottish Crannog Centre, Aberfeldy, Perth and Kinross, of the Oakbank Crannog, excavated in Loch Tay. [Photograph by Timothy Darvill]

Not all settlements provided permanent residences. Excavations at Braehead, Glasgow, revealed an oval palisaded enclosure of simple design built in the sixth century BC to contain one or two roundhouses. It was succeeded as a more massive earthwork enclosure with three lines of ramparts in the fifth century BC, before returning to being an open settlement perhaps a century later. Throughout it seems to have been used for seasonal activities from the late spring through into the early autumn, especially cattle-herding and cheese production.

The overall impression presented by the settlements and economic evidence from the Fortified Settlement Zone of Atlantic Britain is one of numerous small-scale groups pursuing a mainly pastoral lifestyle supplemented where possible with cereal production and the use of more specialized wetland resources. Whether transhumance was a regular feature of the farming cycle is not clear. Society was probably fragmentary, based on kinship groups, with little overall centralized control – possibly the continuation of an earlier tribal system.

## CRAFTS, INDUSTRY, AND INTERNAL EXCHANGE

The production and exchange of raw materials and finished goods became increasingly complicated during the later first millennium BC with regional differences in the production and distribution of artefacts such as glass, metalwork, querns, textiles, salt, and pottery. Many different kinds of tools, weapons, equipment, containers, clothes, and personal ornaments were used, most requiring relatively specialized craftsmanship. Barry Cunliffe has suggested that two distinct levels can be identified: home-based production, and specialist production for regional distribution. These two spheres can be carried over as the basis for interpreting trade and exchange. As with earlier periods, there is no satisfactory way of knowing how trade was conducted, at what levels within society it took place, or indeed how frequently. It is noteworthy, however, that a collection of weights was found at Danebury, Hampshire, suggesting an interest in equivalence and standardization at this time.

In the west, especially in Atlantic Britain, home production seems to account for almost all of the goods made and used, while in the east the two levels are more easily visible both in manufacturing and in the consumption of goods on different types of site. Some mention has already been made of the possibility that individual sites specialized in certain types of production, both agricultural and industrial, and this will be discussed further below.

### *Domestic crafts*

The most widespread household crafts were undoubtedly those we know least about: wood-working and textile manufacture. With rare exceptions, such as the wooden objects from waterlogged deposits and the stains of decayed structures, only the tools used in these crafts survive. Carpenters' tools known include saws, axes, adzes, chisels, and gouges. In addition to the post-built roundhouses, ramparts, and settlement fixtures, boats are known from the River Humber, wooden carts or chariots with iron rimmed wheels are known from burials in the East Riding of Yorkshire and beyond (see below), and bowls, ladles, dishes, mallets, ladders, spear shafts, handles of various sorts, and sword scabbards are known from the Somerset Lake villages and elsewhere. Hurdle-making and basketry is also evidenced at these sites, and trackways were built over wet ground where necessary.

Textile production was widespread to judge from the importance attached to sheep-farming and the distribution of spindle whorls for spinning wool into yarn, bone weaving combs or beaters for packing the weft tight against each other, and triangular clay loom weights for stretching the warp on upright looms. The nature of the cloth produced, whether it was coloured or not with one of the many available natural dyes, for example, is not known. The various pins and brooches of the seventh century BC and later suggest widespread use of woollen cloth for garments, although leatherworking presumably included the making of clothes as well as of harness and utensils.

### ***Ironworking and metallurgy***

Although ironworking began in the tenth century BC, it is not until the eighth century and beyond that there is widespread evidence for smelting, forging, and the use of iron tools and weapons. Why iron should replace bronze is not such a straightforward question as it might first seem because, initially at least, the technological superiority of iron could not easily have been realized. Ease in the acquisition of raw materials may certainly be a factor, and fashion and the desire for novel materials cannot be ruled out either. Stuart Needham has suggested that by the ninth century BC bronze had become a staple of life, its use for making tools and weapons overshadowed by its supra-utility roles in ritual, ceremony, communications with the gods of otherworlds, and as a kind of currency for social exchanges. Iron, he suggests, offered an opportunity to do away with this existing social value system and replace it with a new one based on what was at the time a relatively scarce resource, high in intrinsic and novelty value, with limited options for working, and good potential for recycling. Wider meanings may also be relevant and Melanie Giles has argued that ironworking was metaphorically associated with fertility, skill and exchange, and that the power of ironworking lay in the transformative role of the smith in being both creative and destructive.

As a prelude to adopting iron for practical and ceremonial purposes, it was perhaps necessary to reduce the quantity of bronze in circulation. That is exactly what seems to happen in the eighth and seventh centuries as large amounts of Ewart Park tradition bronzework was deposited as hoards with no intention to recover. Some of the material deposited had never been used, and may indeed have been made especially to dispose of in a ritual of conspicuous consumption. One of the largest hoards of this kind so far recovered in Britain contains over 6,500 pieces of scrap bronze from weapons, axes, vessels, and ornaments; it was found in 1959 at Isleham, Cambridgeshire. Changes to the law on Treasure Trove in England in the late 1990s have added considerably to the catalogue of finds, including scrap hoards from Tattershall, Lincolnshire, with 160 pieces; Ramsgate, Kent, with 88 pieces; and Eaton, Norfolk, with 149 pieces. Hoards of late socketed axes include an assemblage of more than 400 Blandford style axes found at Langton Matravers, Dorset, in 2007 which had been deposited around 800 BC, and a hoard of 33 unused Sompting axes together with other items found in 2005 buried in a pot at Mylor near Falmouth, Cornwall. Breton-style back-to-front Armorican axes with high lead content have been found in more than a dozen hoards including those at Nether Wallop, Hampshire, Ventnor, Isle of Wight, and Eggardon, Dorset, together emphasizing the international dimension to the deflation of bronze supplies through deposition.

Although aspects of the new value system may have focused on social interactions, eating and drinking, and the production of agricultural surpluses, some traditions remained and there is no suggestion that bronzeworking stopped as ironworking started. Very fine Gündlingen-derived swords continued to be produced in bronze until replaced by iron swords in the late eighth century BC. Sheet-metal vessels were produced perhaps to support the expansion of communal eating ceremonies, and some of this material was deposited in traditional ways in bogs and wet

places. The great hoard of 21 objects found in a lake high up in the hills at Llyn Fawr, near Rhigos, Rhonda Cynon and Taff, in 1911 provides the type-site for metalworking industries of the eighth and seventh century BC (109). Deposited about 700 BC, this collection includes an iron spearhead, an iron sickle, and part of a Halstatt C iron sword among an assortment of bronze axes, sickles, spearheads, horse harness fittings, and a cauldron.

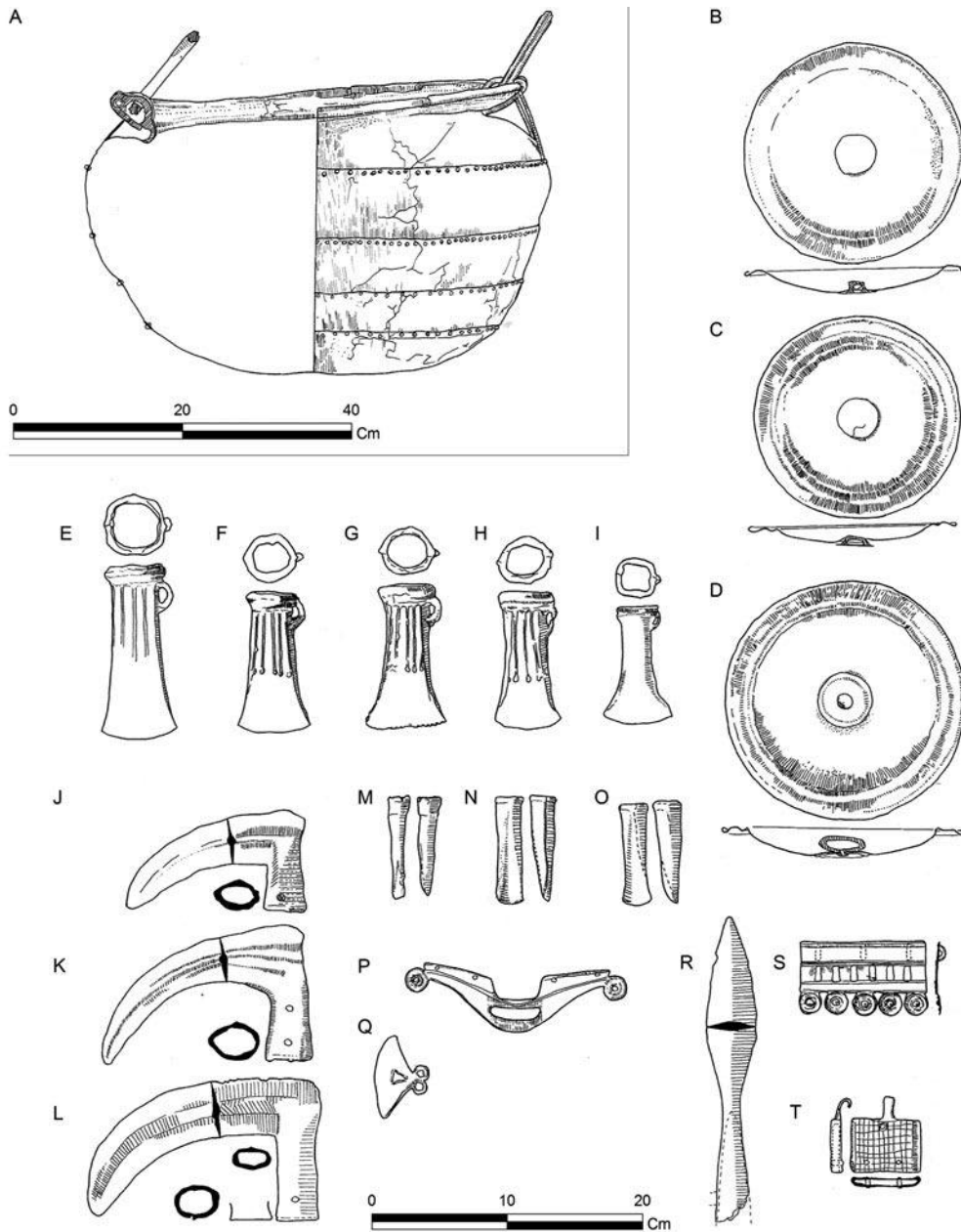
Among the most common items to be made in iron at this time were socketed axeheads such as that from Buscot, Oxfordshire, found with a piece of its wooden haft remaining that was radiocarbon dated to 770–410 BC (OxA-6216:  $2480 \pm 50$  BP). More than 20 similar examples have been recorded from sites across Britain, as well as a range of other items including knives. Given the natural propensity for iron to rust and decay rather quickly, it is surprising that so much does survive.

Most areas of Britain lie relatively near to supplies of iron ore, although the high-quality near-surface outcrops available in the Forest of Dean and Northamptonshire must have been especially attractive. Exactly how the metal was distributed is not at present clear but it seems likely that smelting took place near the source and that ingots were transported to consumer blacksmiths. The most likely candidates for such ingots are the so-called ‘currency bars’ found in two basic shapes: sword shaped and spit shaped. Much has been written about these bars and their possible use as mediums of exchange. They almost all derive from zones where a settlement hierarchy can be discerned in the south and east, and over one third of all examples known come from hillforts, often in hoards. The fact that some have been found sawn up into pieces as if awaiting forging may suggest that they simply relate to the distribution of raw material.

A few blacksmiths’ tools such as tongs, punches, and hammers are known from sites widely scattered around the country, but the main source of evidence for smithing comes from the presence of iron slags and forging waste. Actual smelting furnaces are known at Kestor, Devon, and West Brandon, Durham, and in both cases comprise small pits about 0.5m across with a rest for a pair of bellows. At Moore’s Farm near Welham Bridge, East Riding of Yorkshire, more than 5 tonnes of smelting debris and furnaces dated to the period 350–490 BC were found, one of 18 sites along the Foulness Valley producing iron at this time. Blacksmiths produced a variety of tools for other crafts and farming, as well as ornaments, pins, and brooches.

Gold and silver were not extensively worked between the seventh century and the second century BC, although in the first century BC/AD there was renewed interest in these metals. As already noted, bronze continued to be worked, possibly by part-time metalworkers/farmers, its composition being distinctive of this period with greater amounts of iron present than in earlier times and no zinc. Crucibles and waste casting debris is known from a wide range of sites but perhaps the most fully investigated is the farmstead enclosure at Gussage All Saints, Dorset. Here both iron and bronze were worked in the second century BC, but the bronzeworker specialized in the manufacture of horse harness and wagon fittings including terret rings, bridle bits, linchpins for securing wheels to fixed axles, strap ends, and various other loops and fasteners. These objects were clearly being made for exchange or redistribution of some kind since the quantities involved were far in excess of the needs of the resident community. As an example of the way in which some bronze objects were distributed, mention may be made of the bronze brooches of



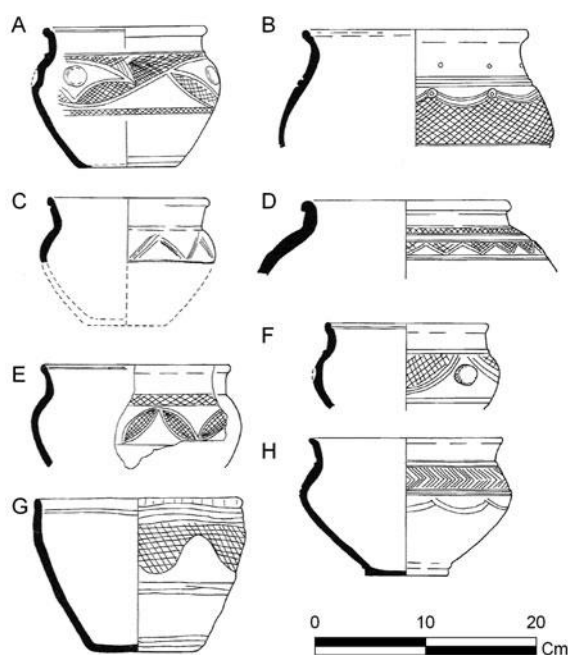


**Figure 109** Finds from the Llyn Fawr Hoard, Rhigos, Rhondda Cynon and Taff. A: sheet bronze cauldron; B–D: bronze horse harness discs; E–I: cast bronze socketed axes; J and K: cast bronze sickles; L: wrought iron sickle; M–O: bronze socketed gouges; P: bronze winged ?harness fitting; Q: bronze razor; R: wrought iron spear; S and T: bronze harness fittings. [After Savory 1976, figs. 2, 10, and 11]

Wessex type made in imitation of La Tène types fashionable on the Continent, in this case with incised lines and dots on the bow. Some 15 almost identical examples have been found, all within a 50km radius of Salisbury, although the exact place of manufacture remains unknown.

### Pottery

Much of the pottery used on sites of the period between 800 BC and 100 BC was locally made. However, petrological studies by David Peacock of fourth to second century BC pottery in the west of England have shown that superimposed on local production was a series of regional production centres which disseminate pottery over distances of about 80–100km from the place of manufacture. Particularly distinctive are three areas in the triangle of land between the River Wye and the River Severn in the southern Welsh Marches where pottery decorated with incised lines and stamped motifs was made for distribution in the Marches, middle Severn Valley, and Cotswolds. Rather similar is the spread of Glastonbury Ware – a dark well-finished pottery heavily ornamented with curvilinear incised decoration – found widely over south-western Britain from South Gloucestershire down to Cornwall and manufactured at six or more regional centres each distinctive because of the types of rock included as tempering agents (110): Gabbroic rock



**Figure 110** Decorated Glastonbury style pottery from south-west England. Mostly third to first century BC in date. [After Peacock 1969, fig. 5]

from the Lizard, Cornwall, Mendip limestone from Somerset, and Old Red Sandstone from Somerset and South Gloucestershire.

One of the most important products of the period was salt, and production during the later first millennium expanded greatly. Manufacture was principally in coastal regions, especially in Lincolnshire, Essex, Kent, Sussex, Hampshire, Dorset, Devon, Cornwall, Somerset, Lancashire, and Cumbria. The techniques of production followed the methods established several centuries earlier. The brine springs of Droitwich, Worcestershire, and Nantwich, Cheshire, area were also used. Investigations by Elaine Morris of the distribution of briquetage containers show that salt from these west Midlands sources was transported over distances of anything up to 120km from source.

Smaller personal items such as ornaments were made wherever the availability of materials permitted. On the south coast at Kimmeridge, Dorset, a major shaleworking industry developed and many sites in the area, for example the enclosure at Eldon's Seat, Dorset, yield evidence of shaleworking. In the north of England jet was worked in similar ways. At Glastonbury, glass beads were manufactured, and boneworking to make handles for composite tools was another widespread activity. There is some evidence, especially in western and Atlantic Britain, that flint was still worked on a small scale for making edged tools.

### ***Luxury goods***

Luxury goods continued to be made following earlier traditions. Of great importance were weapons and parade gear. Again continental influence was strong, especially with the major innovation of decoration on fine objects after the fourth century BC. This ornamentation comprised increasingly complicated curvilinear designs based on the La Tène style art. Among the earliest recipients of such treatment were the iron daggers which became very popular in the fourth century BC although they originated a little earlier. These daggers had bronze sheaths, and examples such as the one from the Thames near Windsor, Windsor and Maidenhead, were highly decorated. By the third century BC, when swords came back into fashion, the elaboration of weapons with intricate designs was well established, and by the second century BC there were numerous schools of local craftsmen in Britain producing finely ornamented cast and beaten metalwork. Among the most spectacular pieces are the shield from the River Thames at Battersea, and the pony headgear from Torrs, Dumfries and Galloway, which is actually a piece of horse-armour onto which have been fixed two metal drinking horns.

Overall, it is clear that no particular classes of site were exclusively the focus of particular crafts or industries, although larger settlements with higher populations naturally provided the setting for a wide range of crafts. At Danebury, Hampshire, for example, potting, leatherworking, textileworking, woodworking, and metalworking were extensively undertaken. In southern and eastern England, at least, it seems that farmer-specialists may have been active, producing a

restricted range of products for redistribution over relatively small areas. Hillforts may have played a vital role in this redistribution, not only providing raw materials such as iron and salt to outlying farms, but also taking in specialist produce and either redirecting it to where it was needed or using it in inter-regional exchange. It is indeed possible that the exchange of fine objects was restricted to a high level of society.

## FOREIGN TRADE AND FOREIGN RELATIONS

From the eighth century BC down to the end of the third century BC contacts between Britain and other parts of Europe were maintained along much the same lines as during the earlier part of the first millennium. Britain was initially known to the Greeks as *Αλβίων* (*Albion*), by the third century BC as *Πρεττανία* (*Prettania*), and soon after as *Βρεττανία* (*Brettania*). Goods and ideas travelling in both directions served to enrich cultures over wide areas and provided a stimulus to innovation. Three main axes of contact can be discerned: cross-channel trade, trade with northern Europe, and trade along the Atlantic seaways. Substantial boats with sails and a design to withstand heavy conditions of the English Channel and Atlantic seaways at most times of the year were in service by the second century BC while a few vessels from the Mediterranean may also have traded into British waters. A lead Graeco-Roman anchor-stock was found in shallow water at Porth Felen off the treacherous coast of the Llyn Peninsula, Gwynedd; weighing over 70kg it dates to the late second century BC, and was presumably lost from just such a ship. A passenger on a similar vessel in northern waters around 320 BC was a young man known as Pytheas the Greek whose extraordinary voyage and the sites and sights he saw along the way have been painstakingly reconstructed by Barry Cunliffe.

Evidence for navigation on inland waterways is plentiful with numerous well-dated examples of log-boat canoes of the late first millennium BC such as those from Shapwick, Somerset; Poole Harbour, Dorset; and Holme Pierrepont, Nottinghamshire. The example found at Hasholme, North Yorkshire, in 1984 was made from a 12m oak trunk felled in 323 BC. It could have carried a load of more than 5 tonnes in as little as 0.75m of water.

By 600 BC central European communities were closely connected to the emergent classical civilizations of the Mediterranean world and were fairly large-scale importers of goods from that area, especially drinking and feasting equipment. Some of this may have made its way to Britain too, although everything so far found here of appropriate date is without a secure archaeological context. Among the more likely imports are a fragment of a Rhodian type amphora of late seventh or early sixth century date from Minster, Kent, an Etruscan bronze oenoche of late sixth or early fifth century date from Northampton, a trefoil-mouthed flagon of early fifth century date from the River Crouch, Essex, and two bronze jugs of fourth century date, one from Tewkesbury, Gloucestershire and one from Bath, Bath and North East Somerset. Pottery was also imported; a Greek black figure kylix comes from the Thames at Reading, Berkshire, and other finds include vessels from the Thames in London.

The sixth and early fifth centuries BC broadly correspond to Hallstatt D on the Continent, and communities in the Thames Valley were clearly in close contact with Europe. Among the items imported to Britain are a short iron sword with antenna-shaped hilt from the Thames in the London area, and a hemispherical cauldron of the same general provenance. Fibulae brooches were also imported – about 80 are so far known from Britain – and a bronze ribbed pail dug up at Weybridge, Surrey, was probably made by a European metalworker sometime in the sixth century BC, although exactly when it arrived in Britain is uncertain.

Metalwork in the La Tène style, which developed in Europe at the beginning of the fifth century BC, appears in Britain very soon after. Again the Thames Valley was a major contact area and the influence on dagger production and dagger sheaths in the area has already been noted, as has the increasing popularity of swords from the third century BC. Ornaments of La Tène style, either imports or direct copies, are found widely across central southern England, but in fairly small numbers.

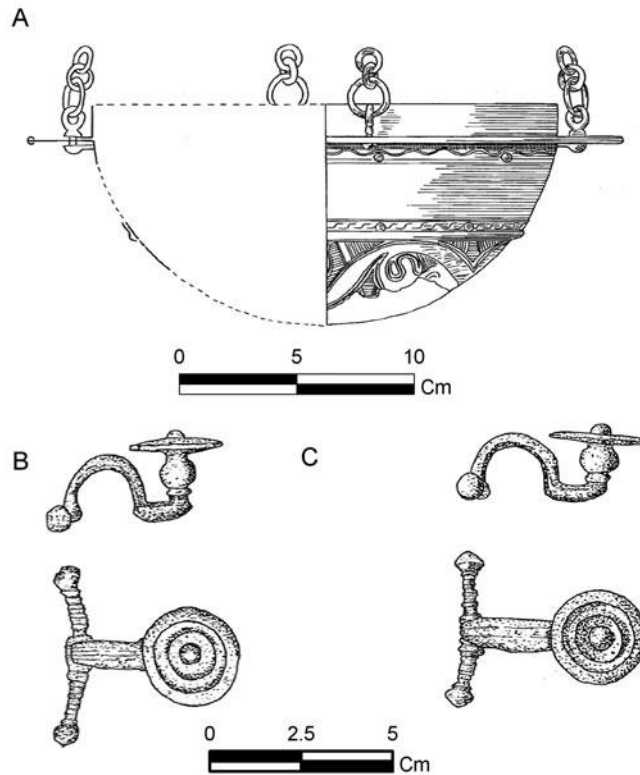
A second area in direct contact with the Continent at this time focused on communities living around the Humber Estuary. Many early La Tène imports and local copies of continental material have been found in this area, which also corresponds to the distribution of a distinctive inhumation burial tradition which followed continental practices. Indeed it has been suggested that lands around the Humber were colonized by immigrants from the Continent at this time, but, as Timothy Champion has pointed out, the traditions represented cannot be traced to any specific area of the Continent and are therefore better seen as the result of close trading ties and local adaptations of widespread ideas.

Communities in Scotland maintained contacts with north European groups through the sixth and fifth centuries BC, as exemplified by the distribution of imported or copied objects such as the distinctive swan's neck pins, of which eight examples are known in the area.

In western Britain the main axis of contact from the fifth century BC onwards was between the south-west peninsula and Iberia and the Mediterranean. Tin was the common theme of this contact, Devon and Cornwall being major suppliers of what in European terms is a fairly scarce metal. Two bronze fibulae brooches of Iberian origin were found accompanying burials in an inhumation cemetery at Harlyn Bay, Cornwall, and a third example has been found at Mount Batten, Plymouth, which was active as a trading port at this time.

Greek coins start arriving in Britain during this period as a result of trade along the Atlantic seaways to the Mediterranean. The earliest gold coins, possibly dating back to the third century BC, were heavy half- and quarter-staters originating in the Picardy area of northern France. Derived from coins minted at the Greek colony at Tarentum in southern Italy, ultimately modelled on those of Phillip II of Macedon, most come from Kent and may have circulated only in the extreme south-eastern corner of Britain. A number of slightly later imports have been found in southern Britain, but only one, issued by Ptolemy V (204–181 BC), comes from a secure archaeological context at Winchester, Hampshire.

The western trade route also allowed contact between western Britain and Gaul, and it may have been through this route that a remarkable bronze hanging bowl, found in a stone cist appar-



**Figure 111** Examples of fourth to second century BC metalwork imported into western Britain. A: Bronze decorated hanging bowl found at Cerrig-y-Drudion, Conwy. B and C: bronze brooches from a cemetery at Herlyn Bay, Cornwall. [After Smith 1926, fig. 2; Whimster 1977, fig. 30]

ently without any trace of a body at Cerrig-y-Drudion, Conwy, came to Britain (111). This vessel is hemispherical in shape with a horizontal flange to which are attached four chains for suspension. The underside is decorated with an elaborate scheme of incised palmettes and acanthus half-palmettes thrown into relief by a cross-hatched background. It was probably made in western France in the fourth century BC.

In the third and second centuries BC contact along all three main axes of trade slowed down, and it remained at a relatively low level until the beginning of the first century BC when a new episode of intense contact along the western seaways began and new trading ports like Hengistbury Head, Bournemouth, and Poole Harbour, Dorset, developed (see Chapter 8). Interestingly, this hiatus in foreign trade engendered greater local initiative among craftsmen in southern England who continued to develop their products relatively free from continental influences.

## BURIAL

Like so many features of society between 800 BC and 100 BC, evidence for burial and ritual follows closely the patterns prevailing in the earlier first millennium BC. While it is often stated that few burials of the later first millennium BC show up in the archaeological record, the advent of extensive developer-funded excavation coupled with the more regular application of radiocarbon dating to unaccompanied burials is starting to redress the balance.

Barrow-burial lingered on among a few communities, and deposits of later first millennium BC date are known, for example, at Caburn, East Sussex; Buntley and Creting St Mary, Suffolk; and Warborough Hill, Norfolk, where cremations have been found with pottery of sixth century BC date. At Handley Down, Dorset, a square barrow loosely dated to this period was excavated in 1969 and was found to contain a cremation deposit. Research by Rowan Whimster has shown that from the sixth century BC onwards three overlapping traditions of burial can be identified across Britain.

### *Cists and flat cemeteries in Atlantic Britain*

In the Atlantic area inhumation graves and cemeteries of stone-lined cists were common. Burials were usually crouched, and grave goods poor: at best simply a few personal ornaments such as pins, brooches, or a bracelet. The largest cemetery so far known is at Harlyn Bay, Cornwall, where 130 or so burials were found around 1900, mostly preserved beneath a large sand-dune. Other cemeteries include Trelan Bahow, Isles of Scilly, Trevone, Cornwall, and Mount Batten, Plymouth. In parts of western Britain cist-burials may have been a lot more common than is often supposed; the lack of grave goods, and in acid soil areas the lack of preserved skeletons, makes identification very difficult. The presence of the imported hanging bowl in a cist at Cerrig-y-Drudion, Conwy, may indicate the existence of rather richer burials in these more elaborate structures. In Scotland cist-burials, both singly and in cemeteries, are widespread. At High Pasture Cave on Skye, Highland, a young person was buried in a stone-lined grave c.300 BC. Other graves in the west lack the elaboration of cists. At Stackpole Warren, Pembrokeshire, the crouched inhumation of an adult, dated to 360 BC–AD 20 (CAR-104: 2110±60 BP), was found in simple pit grave near to a standing stone erected perhaps a millennium earlier.

### *The Arras tradition*

The best-known group of burials dating to between the fourth century and the late second century BC are those in north-eastern England and south-eastern Scotland, generally called the Arras tradition after the cemetery of that name excavated at the turn of the twentieth century. Many thousands of graves are now known in the area, both individual isolated burials and extensive cemeteries.

The cemetery at Danes Graves, East Riding of Yorkshire, contained about 500 burials. Most of the graves originally lay under barrows surrounded by rectangular or square ditches, and while subsequent agriculture has largely removed the barrows the ditches can still be seen as cropmarks on aerial photographs. The burials were inhumations and mostly crouched, although some are found extended, and some have wooden coffins. Grave goods include La Tène type brooches, bracelets, pins, and other ornaments. At Barton Fleming, East Riding of Yorkshire, excavations by Ian Stead found that the burials formed a linear cemetery along the line of an earlier land boundary. Most of the burials were orientated north–south and grave goods included pottery, pig bones, and small ornaments. However, some burials were orientated east–west and these contained a slightly different range of grave goods including iron knives and swords.

Among the more unusual burials in the Arras tradition are those containing wheeled vehicles (112). At least ten are known from older excavations, but since 1980 several new examples have come to light. At Wetwang Slack, East of Riding of Yorkshire, the square barrows and central graves of the vehicle burials were outwardly similar to the rest of the burials in the area, but the circumstances of deposition were rather different. Of the three found in 1984, two were male graves and the other that of a female. All shared a number of features. First, a large pit had been dug to contain the whole deposit. Next the vehicle, variously described as a cart or chariot, was dismantled. The wheels were placed in the grave first, followed by the body of the deceased. Each interment was accompanied by a range of grave goods: the woman had a side of pork, an iron mirror, a dress pin, and a work-box of bronze; the men had their swords, spears, and shields. Above the body were the remains of the rest of the vehicle including the pole, all the harness fittings for two horses, and the wooden chassis of the vehicle on the top.

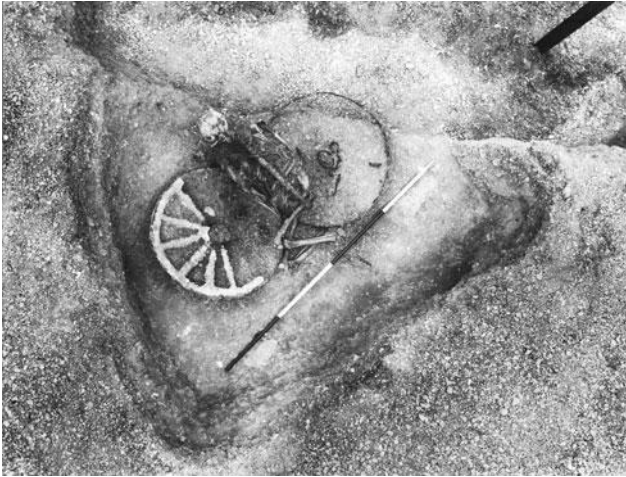
The known distribution of such burials was extended beyond the heartland of the East Riding of Yorkshire in 2001 when a burial containing the remains of a two-wheeled chariot was found at Newbridge, Edinburgh. Unlike the vehicles in graves further south, this one had been placed in the grave complete. Another similar burial was found at Ferrybridge, Wakefield, beside the River Wharfe on the eastern flanks of the Pennines, again with the vehicle buried complete.

### ***Graves and pit burials in southern and eastern England***

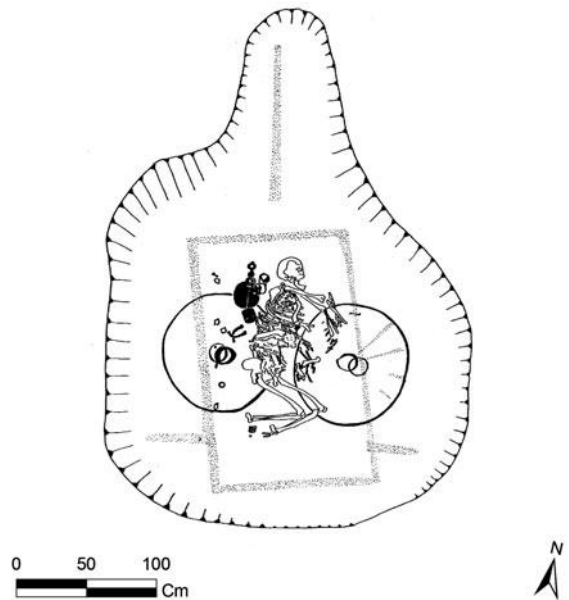
In southern England burials have been recorded on and near settlements and hillforts, often as disarticulated skeletons in pits and ditches. At Danebury, Hampshire, for example, over 70 individuals were represented among such interments (10 per cent of all pits examined contained human bones), some possibly deposited as a result of a battle at the site. Similar deposits are known on non-hillfort sites too: at Gussage All Saints, Dorset, seven individuals were represented in pits assigned to the second phase of the settlement, while at Winnall Down, Hampshire, 18 burials including men, women, and children were found in quarries contemporary with the fourth phase of occupation dated to the third to first centuries BC. At Micheldever Wood,



A



B



**Figure 112** Chariot/cart burials at Wetwang Slack, East Riding of Yorkshire. A: View of the burial 1 under excavation in 1984. Scale totals 2m; B: Plan of the burial 2. The stippled features represent shadow marks indicating decayed wood. [(A) Courtesy of Bill Marsden (Humberside County Council Archaeological Unit). Copyright reserved. (B) After Dent 1985, fig. 3]

Hampshire, a minimum of 14 people were buried in pits, the enclosure ditch, and graves within the banjo enclosure, again including men, women, and children.

Burial rituals were far from casual. Research by Rebecca Redfern has shown that samples of human bone from Gussage All Saints and Maiden Castle, both in Dorset, comprised bodies that

had been exhumed, received secondary burial, and then selected skull and long-bones incorporated into structured deposits within pits and ditches. Evidence from the bones themselves showed perimortem trauma indicating that many individuals had received blunt-force injuries as the cause of death.

## **RIVERS, SHAFTS, WETLAND, HUMAN HEADS, AND COSMOLOGY**

Interest in rivers, lakes, and wet places continued through from earlier times, and large amounts of metalwork of the finest quality has been found in such places. The wealth of material from the Thames and the Witham has already been mentioned, and it is notable that east- and south-east-flowing rivers seem to have been of special interest. At Fiskerton, Lincolnshire, on the lower reaches of the River Witham, a substantial wooden causeway was built from the north bank across wetland to the river itself. Dendrochronology of the oak and alder posts, some of which had been driven 4–5m into the mud, showed that the earliest had been felled in the winter of 457 BC with subsequent felling and repair on ten occasions over a period of about 150 years. The dates of these episodes of felling associated with repairs to the causeway coincide with known total lunar eclipses during wintertime, a period which may have been considered propitious for killing trees. Items committed to the river from the causeway includes six early La Tène swords, one with a fine coral-inlay anthropoid hilt, and 11 spearheads, as well as various fragments of scabbard, shields, and sheet-bronze objects. Further away was a group of large axes, metalworking tools, files, a saw, and numerous bone spearheads. Fragments of human bone dated to the fifth and fourth centuries BC were present, including a portion of skull with an unhealed cut to the side of the head. Further south at Fengate, Peterborough, beside Catswater in the Nene Valley objects, mainly personal ornaments, continued to be deposited as late as the first century BC in areas that had attracted attention in the early first millennium BC even though the timber structures would have long since disappeared.

Away from river and lakes specifically ritual sites of this period are harder to identify. Anne Ross has suggested that a large number of shafts and deep pits in south-eastern England were ritual shafts, but their interpretation is problematical, and some may simply be wells. At Mine Howe near Tankerness, Orkney Islands, however, a rock-cut shaft about 7m deep has 29 stone steps leading down to a chamber or cistern. When first opened in 1946 it was said to contain a spread of bones, although details are far from clear and dating remains problematic.

Shrines have been located within some hillforts. At Danebury, Hampshire, Barry Cunliffe has suggested that four square-shaped buildings in the centre of the fort served such as function, and he cites a comparable example from Cadbury Castle, Somerset. Some Roman temples may have been built on earlier shrines, as perhaps at Maiden Castle, Dorset. On the Cotswolds at West Hill, Uley, Gloucestershire, a large rectangular ritual enclosure 48m long by 25m wide and bounded by rock-cut ditches underlay an early Roman temple of conventional design.

Classical writers relate that the Druids were a powerful class of religious leaders in the later first millennium BC in north-western Europe, and although there is no firm archaeological

evidence for them it may be assumed that they serviced the ritual centres at this time. Classical sources also confirm that, in addition to formal ritual shrines, natural places such as groves and springs were used as sacred retreats.

A preoccupation with human heads can be glimpsed at this period, and is a common theme of Celtic ritual throughout western Europe which persisted into the first century BC and beyond. Decapitated anthropomorphic figurines have been found, for example at Garton Slack, East Riding of Yorkshire, but more gruesome is the evidence for the display of human heads found at a number of sites. The best-known is Bredon Hill, Worcestershire, where six human skulls were found in a line within the collapsed entranceway of the hillfort and were thought by the excavator Hugh Hencken to represent trophies placed above the gate. At Danebury, Hampshire, eight pits inside the fort contained single human skulls within their backfill, of which six belonged to adult males, one was from an adult female, and one belonged to a child. There were also hints that cannibalism may have been practised on a very small scale, perhaps the ritual consumption of an enemy to symbolize subjugation. Perforations in human skulls from Hillhead, Highland, and Maiden Castle, Dorset, may have been to allow suspension of the head.

Carved stone heads are known from the Forest of Dean, Gloucestershire, a tradition perhaps related to the continuing deposition of carved wooden figurines in wetland contexts, of which the best-known are the Roos Carr figures from Holderness, East Riding of Yorkshire, dated to 770–400 BC (OxA-1718: 2460±70 BP). Made of yew, this group comprises five sexually ambiguous people, at least two with round wooden shields. Originally, there were probably eight figures, four in each of two boats (only one boat survives), all with quartz or limestone pebbles for eyes, and pubic holes which look female when displayed without a penis and plausibly male if one is added. Bryony Coles associates these figures with Odin/Woden, or an earlier incarnation of that Teutonic shaman-god, continuing earlier traditions (see Chapter 5). The much larger contemporary female figure from a peat bog at Ballachulish, Highland, dated to 790–410 BC (HAR-6329: 2490±70 BP), is of alder and at present cannot be linked to the pantheon of the period on the basis of the material used in her construction.

Further glimpses of some deities prevalent in the late first millennium BC may be possible through extrapolation from more recent placenames, and both Anne Ross and Miranda Green have done much to make such things comprehensible. Local deities were often connected with natural places such as: *Arnemetia* (the goddess who lived by the sacred grove) at Buxton, Derbyshire; *Coventina* presiding over a spring near Carrawburgh, Northumberland; *Verbeia* the cult-spirit of the River Wharfe in Teesdale; and *Sulis* the goddess of the hot springs at Bath, Bath and North East Somerset, whose name suggests solar connotations. Looked at in a broader perspective Barry Cunliffe has noted how the Indo-European deities of this period fall into two main categories: males who are warriors associated with the sky and tribal groupings; and females who are concerned with fertility, the earth, and territorial matters. The pairing of male and female deities is common and based on earlier traditions, as also the daily cycle of the sun across the heavens by day and through the underworld by night (see Chapter 6), providing a metaphor of life itself. The night-journey of the sun from

west to east through the underworld was perhaps the reason that rivers flowing roughly eastwards, such as the Thames, attracted so much attention and may also help to explain the interest in lunar events associated with riverine depositions at Fiskerton, Lincolnshire, described above.

Links between cosmological beliefs and the architectural order imposed on buildings and structures is to be expected, and Mike Parker Pearson, Richard Hingley, Alastair Oswald, J D Hill, and others have recognized a number of patterns in the social use of space at settlements. In the form and construction of roundhouses, for example, the entrances seem to have been given special attention with a porch, substantial door-jambs, thresholds, and sometimes the presence of human or animal burials as foundation deposits under the northern side of the doorway. The entrances to dwelling houses almost universally open to the east or south-east, and are thus orientated towards the rising sun on the equinoxes or the Winter Solstice, while the structure of the house perpetuates a roughly south-east to north-west axis that symmetrically subdivides the space within. The south side (the left on entry) is given over to living space for cooking, eating, and craft activities with abundant debris represented, while the north side is generally debris-free and was probably the sleeping area. The circular form of the house itself may metaphorically represent both the celestial cosmological cycle and the cycle of life as the sun moves around the house, from the door southwards during the day as people go about their daily routines until its setting point on the structural axis to the west, later notionally moving northwards through the underworld at night as people sleep. If the foundation deposits are included in this model then death represented on the north side of the entrance (darkness and night-time) is juxtaposed with birth on the south side (sunrise and day-time). Similar binary oppositions between life and death, day and night, sun and moon, and old and young, can be glimpsed from the symbolism of a circle juxtaposed with a crescent found on some La Tène anthropomorphic-hilted short swords. Indeed, Andrew Fitzpatrick has suggested that these astral symbols may be linked to indigenous calendars, the marking of time, or the propitious execution of specific rites and rites.

Beyond dwelling houses, similar structuring can be seen in the layout of settlements and enclosures. Settlement enclosures tend to have entrances opening to the east or south-east, and structured deposits involving burials, food, and valuable items are often associated with the ditch terminals either side of the entrance.

## **SOCIETY AND POLITICS**

By the second century BC society in Britain had reached a level of complexity previously unattained. Population estimates are always difficult with incomplete information, but with hillforts and larger settlements housing perhaps 150 to 200 people, and smaller settlements up to 20, an overall population well in excess of 2 million must be envisaged. Most of the landscape was used in some way, although there were marked regional differences which allow two general patterns of social organization to be glimpsed: chiefdoms and tribes.

In the north and west, settlement patterns suggest specialization in the use of resources with numerous small-scale autonomous communities and little or no centralized control. There is scant evidence for formal demarcation of territories or of investment in the landscape by way of fields and boundaries. To judge from the widespread distribution of heavily defended sites, warfare and raiding were widespread. Evidence for storage at these sites is scant but, as livestock probably formed the mainstay of the subsistence economy, food and wealth would effectively have been tied up in the animals and so, as it were, stored on the hoof. Access to high-quality goods was possible, as demonstrated by the incidence of rich deposits in graves and wet places in western regions, but compared with the south and east, Atlantic Britain was generally rather poor. This is not to say, however, that social organization was not complex and political ties not deep-rooted. In small-scale dispersed societies arrangements had to be made for the provision of wives and inheritance sufficient to maintain viable productive and reproductive units. Kinship ties probably provided the basis of political structure and a loose-knit tribal network based on descent patterns, inheritance, and alliances seems to fit the evidence.

In southern, central, and eastern England, and in parts of southern and eastern Scotland, the pattern is rather different since various forms of settlement hierarchy can be identified, either homesteads and hillforts or farmsteads and villages. In both cases nucleated settlements provided focal points, nodes in the settlement system which may also have been nodes in the political system. In this respect, the villages of eastern and central England may have performed similar roles to the hillforts of southern and western areas. The considerable number of developed hillforts suggests that if they do represent political centres then territories were relatively small. Warfare remained widespread if not endemic in the hillfort zones, but by the second century BC forts and weapons had taken on such an ostentatious air in their design that it is questionable whether massed warfare and raiding continued in the same way as previously. It is possible that more formalized warfare was undertaken by a warrior class or that single combat by champions had taken over. Warriors were certainly present, and it is tempting to identify also a priest class, a class of specialist craftsmen, and a class of part-time specialist craftsmen/farmers.

Raiding may have been one component of warfare. Cattle raiding is enshrined in the myths and stories of later times and may well have been happening in and around the hillfort-dominated zone. And it may not have only been cattle. Hubert Savory has rather speculatively suggested that some or all of the objects in the Llyn Fawr hoard were booty obtained during a raid on Somerset or some other area of the south-west by the hill folk of Glamorgan.

Whatever the reality of the various systems visible in different parts of the country, strong political units capable of mobilizing considerable resources are clearly represented throughout Britain. Moreover, the basic unit, the household, is virtually the same everywhere; even the dimensions and the construction of roundhouses are similar over the whole country. In the last episode of prehistory in Britain during the century and a half leading up to the Roman conquest it was the ability of these political units to combine and work together in different arrangements that largely determines the course of events in different areas.

# 8

## ON THE THRESHOLD OF A DREAM

### Living beside the Roman Empire 100 BC–AD 50

After perhaps two or three centuries of relative stability, communities right across Britain underwent a series of fairly profound changes, starting about 120 BC. Archaeologically, this is most apparent in new kinds of settlement, infilling of the landscape, and the enclosure of many formerly open sites. Why it should have happened is not entirely clear, but a major contributory factor must have been the effects of a westward expansion of Roman power and the restructuring of relationships with the Mediterranean world. This gave some sections of Britain's indigenous population opportunities to forge new alliances, achieve new kinds of social mobility, and make new cultural choices in the construction of their identity.

The first century BC was a period of turbulence in Roman politics. The State was rapidly evolving, largely under pressure from ambitious leaders with an efficient military machine at their disposal. By 100 BC Roman provinces had been established along the northern coast of the Mediterranean from Asia Minor to Portugal. North of the Alps the provinces of Cisalpine and Narbonensis Gaul had been founded. Thus in 62 BC, when Pompey returned to Rome triumphant following his conquests in the East, his rival Julius Caesar sought an equivalent chance to bolster his military prestige and to build his financial resources in the West. Three years later he began his famous campaigns. By 57 BC he had taken Gaul and soon after established the frontiers of the Roman world along the coast of northern France and Belgium, and eastwards along the Rhine. Britain remained outside direct Roman rule for nearly a century after the conquest of Gaul, but nonetheless lay on the edge of one of the greatest civilizations in history.

Britain's physical, social, and political proximity to the Roman world provides an important additional source of information for later prehistory: the writings of classical scholars. A few early references to Britain are known, largely through being reiterated in later texts, but Greek and Roman geographers, ethnographers, historians, philosophers, and poets regularly used information about Britain in their writings from the first century BC onwards. The account of the

Gallic Wars by Caesar himself, and the works of Poseidonius copied by Strabo (c.64 BC–AD 21) and Tacitus (AD 56–115) are among the most extensive and best known, but altogether more than 120 classical authors wrote about Britain.

Among the information embedded in classical texts are the names of people – the earliest individuals known in British history – and places, accounts of battles, and descriptions of the country and its inhabitants. Caesar (*Gallic Wars* V, 14, 3) remarks that the Britons dye their bodies with woad to produce a blue colour and that they wear their hair long and shave the whole of their bodies except the head and the upper lip. Tacitus (*Agricola* II) makes a distinction between the large-limbed red-haired people of the north, who he thought were of Germanic origin, and the swarthy curly haired people of the west. Elsewhere details of warfare, marital customs, religious beliefs, and even glimpses of political and social organization can be found. Because the classics have long been held in high regard by scholars of literature and antiquarians alike these commentaries have profoundly influenced understandings of later prehistoric times, sometimes at the expense of the archaeological evidence.

Jostling for attention alongside classical sources, mention may also be made of the Irish epics. These comprise folk-tales such as the *Cattle Raid of Cooley*, first written down in the early Middle Ages but arguably derived from far more ancient oral traditions. Unfortunately, the influence of Christianity and classical sources were so strong that it is sometimes hard to disentangle what was invented to impress the reader from what was derived from ancient tales. Accordingly, these sources are very difficult to use. Indeed all literary references to Britain of early date have to be treated with appropriate caution and due consideration of the sources of information available to the writer: first-hand experience, secondary sources, informers, or simply the power of imagination. Their reasons for writing must also be examined. In the past much attention was given to squaring comments by classical scholars with archaeological evidence, most of it in vain. Archaeological evidence and literary evidence are better seen as being complementary rather than overlapping, and neither should be forced together to substantiate the claims of the other.

Contemporary with increases in textual references to Britain comes the earliest evidence for writing. From the first century BC papyrus was used in Britain during the manufacture of potin coins which are mostly found in south-eastern England. It is unlikely that papyrus was imported simply to cut up into strips to use in making coin moulds, and the only reasonable explanation is that it was already here in its usual role as material for writing on. Other coins minted in Britain from the first century BC onwards include the names of individuals in the Latin alphabet, as on Roman coins. Indeed Roman die-makers may have been involved in the establishment of some mints. A fragment of pottery dated to the early first century AD from Skeleton Green, Hertfordshire, has the name *CIINATIN* cut on its shoulder as a graffito. However, the site was certainly closely involved in trade with the Roman world so whether the letters were cut by a trader or a native inhabitant is not known.

The extent to which Latin was used in later prehistoric Britain alongside indigenous languages affiliated to either Germanic or Celtic language families has been a matter of some debate.

Jonathan Williams argues that people living in south-eastern Britain had a complex and informed knowledge of Latin well before the Roman Conquest. It is a view supported by John Creighton's analysis of early British coinage from which he suggests that Latin speech and writing was adopted by emergent elites in south-eastern Britain as a way of demarcating themselves from their British-speaking and largely illiterate subjects.

Language and social power serve to emphasize the importance of both internal and external factors in prompting and sustaining change in the first centuries BC and AD. Issues of identity, autonomy, society, class, household structure, economy, and the politics of alliances between communities at different scales all come to the fore in trying to understand this critical period. However, one of the early triggers or catalysts of change appears to be cross-channel trade and interactions with the Roman world leading up to Julius Caesar's first foray onto British soil in 55 BC.

## **INTERNATIONAL TRADE AND EXCHANGE 100–55 BC**

Of the known principal routes of trade between Britain and the Continent, it was those along the western seaways that carried the acceleration of contact between the two during the early first century BC. The west country, particularly western Hampshire, Dorset, Devon, and Cornwall, was closely linked to northern and western France, and also directly with the Mediterranean.

Closely connected with the rise of foreign connections was the development of trading ports where natural harbours provided good places for ships to dock. Among the most extensively excavated is Hengistbury Head, Bournemouth (113). Here, ships from the Continent had been anchoring in the spacious harbour since perhaps the second millennium BC, but after 150 BC many more ships came and went, and greater quantities of material passed through this port. The headland was defended by two lines of ramparts, and occupation was widespread. Investigations by Barry Cunliffe demonstrated that the range of imported goods included wine in amphorae (Dressel IA types) from Italy, fine black cordoned and graphite-coated pottery from Brittany, glass probably from the Mediterranean, and coins from northern France. These coins, so called Armorican types, are mostly found in south-west England, and stand at the head of a long series of imported and indigenously produced coins. Hengistbury Head was also the site of manufacturing industries: bronzeworking and ironworking are attested and there are the remains of two hearths for the extraction of silver from argentiferous copper or lead. Other ports have been located along the south coast, including Mount Batten in Plymouth Sound, Plymouth, Mount Folley and Burgh Island near Bigbury-on-Sea, Devon, The Verne on the Isle of Portland, Dorset, and Green Island/Cleavel Point on the south side of Poole Harbour, Dorset.

Metal seems to have been a unifying factor in the Atlantic trade of the early first century BC. Tin, copper, iron, and lead are all available in south-western Britain and were probably the main export. The distribution of imported objects inland from the south coast reinforces this





**Figure 113** Excavations in progress at Hengistbury Head on the west side of Christchurch Harbour, Bournemouth. This site emerged as one of the most important ports in southern England during the second and early first century BC. [Photograph courtesy of Barry Cunliffe. Copyright reserved]

interpretation and allows shale and salt to be added to the list of probable exports. Many different types of site, including hillforts and defended farmsteads, have yielded imports resulting from this trade. At Carn Euni, Cornwall, for example, sherds of Dressel IA amphorae suggest that wine was sometimes served by the head of that community just as sherds from similar vessels found within the stronghold of Maiden Castle, Dorset, show that wine was served from time to time here as well. Importantly, the immediate effects of the trade were relatively restricted to south-western regions but they need to be set within a wide context of trading activities and population movements.

### ***The Veneti and the Belgae***

In writing about his conquest of Gaul, Julius Caesar refers explicitly to two tribes whose fates bear directly on events in Britain. First (*Gallic Wars* III) are people living mainly in south-western Brittany – known as the Veneti – who monopolized seaborne trade in the Atlantic province during the early first century BC. They had the largest fleet of ships and the widest experience of navigation in the area, and no doubt regularly visited British ports such as those already men-

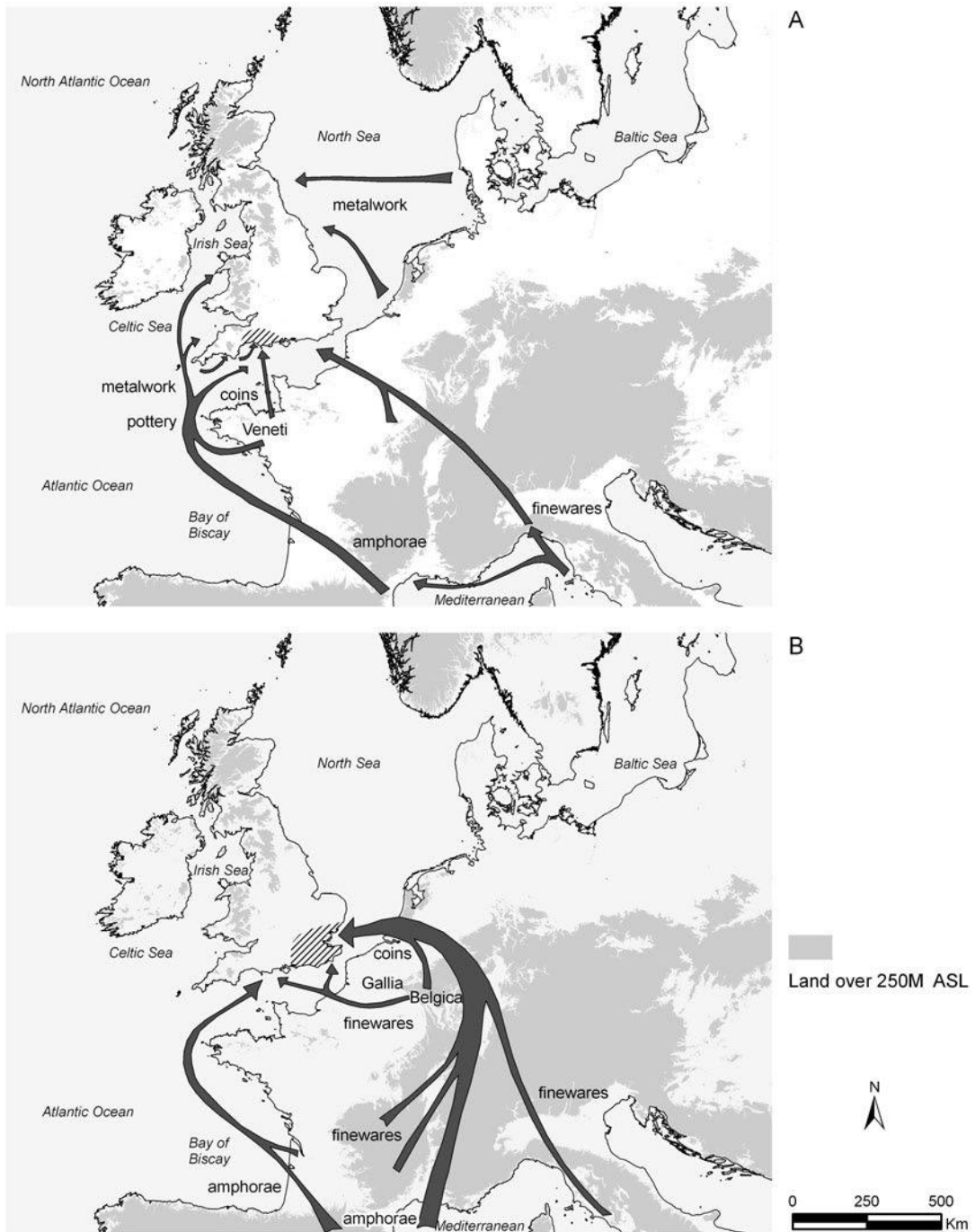
tioned. Caesar (*Gallic Wars* III, 1) describes their ships, noting their flat bottoms to ride shallow water, high bows and sterns fitted for heavy seas and violent storms, hulls made of oak, sails of rawhide, iron bolts to fasten cross-timbers, and anchors secured with chains rather than ropes. Just such an iron anchor and its chain together with heavy iron bolts were found in the mid nineteenth century within a hillfort at Bulbury near Lytchett Minster, Dorset, less than 3km north of Poole Harbour. Clearly, the Veneti were skilled mariners and were trading with communities in Britain, but because of those skills and their independence Caesar destroyed their fleet and subjugated the tribe shortly after his conquest of Gaul.

Another Gaulish tribe referred to by Caesar is the Belgae who occupied what is now Belgium in the first century BC (*Gallic Wars* V, 12). These people, Caesar claimed, had gone to Britain to invade and loot but then stayed to till the fields and settle in what he describes as the maritime part (usually taken to mean south-eastern England) where they become known by the name of the tribe from which they derived. Naturally, evidence for the arrival of these people has frequently been sought in archaeological remains, especially the distribution of coins derived from northern France (Gallo-Belgic types), the distribution of cremation cemeteries, and the distribution of certain types of pottery which are all found in Kent and Essex. However, much of the evidence crucial to these arguments can now be questioned. Ann Birchell demonstrated that the pottery is too late in date to be connected with the arrival of any immigrants in the first half of the first century BC. The cremation cemeteries are also too late because of associations with the pottery. Moreover, Derek Allen has shown that the earliest coins of the Gallo-Belgic series are too early to be connected with a Belgic invasion. Instead, rather different explanations must now be sought for what Caesar was saying, and these revolve around the question of refugees and displaced people.

That some Gauls sought refuge in Britain at the time of the Roman conquest of their own country or soon after can hardly be doubted in view of the close contact that evidently existed between the two areas during the preceding centuries. As Barry Cunliffe has pointed out, if Caesar's words are followed closely, and the people who settled in Britain continued to be called by their tribal name as Caesar says, then the area round the Solent should be regarded as the most likely area of settlement; Winchester, Hampshire, for example, was called *Venta Belgarum*, in Roman times: 'the capital of the Belgae'. To the north, Silchester, Hampshire, was called *Calleva Atrebatum*: 'the place of the Atrebates in the woods'; the Atrebates were another Gaul tribe whose members may have sought refuge in Britain (see below).

## CAESAR'S EXPEDITIONS TO BRITAIN

Patterns in the movement of goods and people changed after the Roman conquest of Gaul (114). The destruction of the Veneti fleet must have caused considerable disruption, and certainly the western seaways declined in importance as the opportunities for trade with continental communities decreased. At about this time, in 55 and 54 BC, Caesar led two separate expeditions into Britain. Neither resulted in Britain being annexed to the Roman world but one of the purposes of



**Figure 114** Maps showing the continental origins of goods imported into Britain. A: third to mid first century BC; B: Mid first century BC to first century AD. [Source: Author]

the missions was probably to establish formal trading links between Rome and those groups in Britain prepared to enter into alliances and partnerships. Thus in a sense Caesar was paving the way for Roman traders and merchants to establish themselves here, and perhaps at the same time trying to soften the Britons up to make annexation rather easier at some later date. For those people in Britain hoping to join the Roman world sooner rather than later, Caesar's visit placed them on the threshold of a dream involving new wealth and happiness; for others it must have prompted nightmares and the dark shadows of imperialist domination.

No archaeological evidence of Caesar's campaigns in Britain is known for certain, despite the fact that heavy casualties were apparently inflicted on the Roman army that must have occasioned burial grounds. If usual army practice was followed, fortresses and camps should also have left some trace, but none have been claimed. All knowledge of the campaigns therefore derives from Caesar's accounts (*Gallic Wars* V), and they are a familiar story. News of a proposed invasion in 55 BC reached the leaders of groups in southern England, and they sent envoys to submit to Rome. These were sent back home with generous promises if they kept their resolve, but it seems that when the invasion force comprising two legions of the Roman army arrived in Britain they were met with hostilities. In particular, the native British alliance forces fielded their cavalry and a number of chariots, which seem to have taken the Roman army by surprise and caused them grave difficulties. The Romans did, however, establish a bridgehead, but after various agreements and further resistance the army found it was making little headway and withdrew to Gaul.

The following year, 54 BC, Caesar returned to Britain with a stronger army. By this time the British chieftains of southern England united against the common foe under a leader named Cassivellaunus who seemingly lived north of the Thames, perhaps with his capital at *Verulamium* near present-day St Albans, Hertfordshire. Despite many setbacks Caesar advanced beyond the Thames into the territory controlled by Cassivellaunus, launching an attack on what Philip Crummy has described as an armed camp of tribal cattle barons. By this time it was late summer, and after several successful battles against the British, Caesar accepted the surrender of a number of leaders on condition that they paid an annual tribute to the Roman government. He then returned to Gaul where in the following years other matters occupied him so that no further sorties into Britain were undertaken.

The effects of Caesar's visits to Britain and their aftermath can perhaps be best judged by the number of changes that can be glimpsed in the economic and political organization of communities across the country over the following few decades. These were most marked in south-eastern Britain where the traditional settlement pattern altered considerably with accompanying changes in burial rites and in the use and circulation of fine objects. Elsewhere changes were less dramatic, but nonetheless perceptible. Overall, three distinct zones can be recognized across Britain from about 50 BC onwards, and these have been characterized as a Core Zone, a Periphery Zone, and an Outer Zone by Colin Haselgrove in his study of the effects of foreign trade on the development of society in the later first century BC (115). Each of these zones is considered below in turn, but it is important to recognize that they were formulated as an heuristic framework

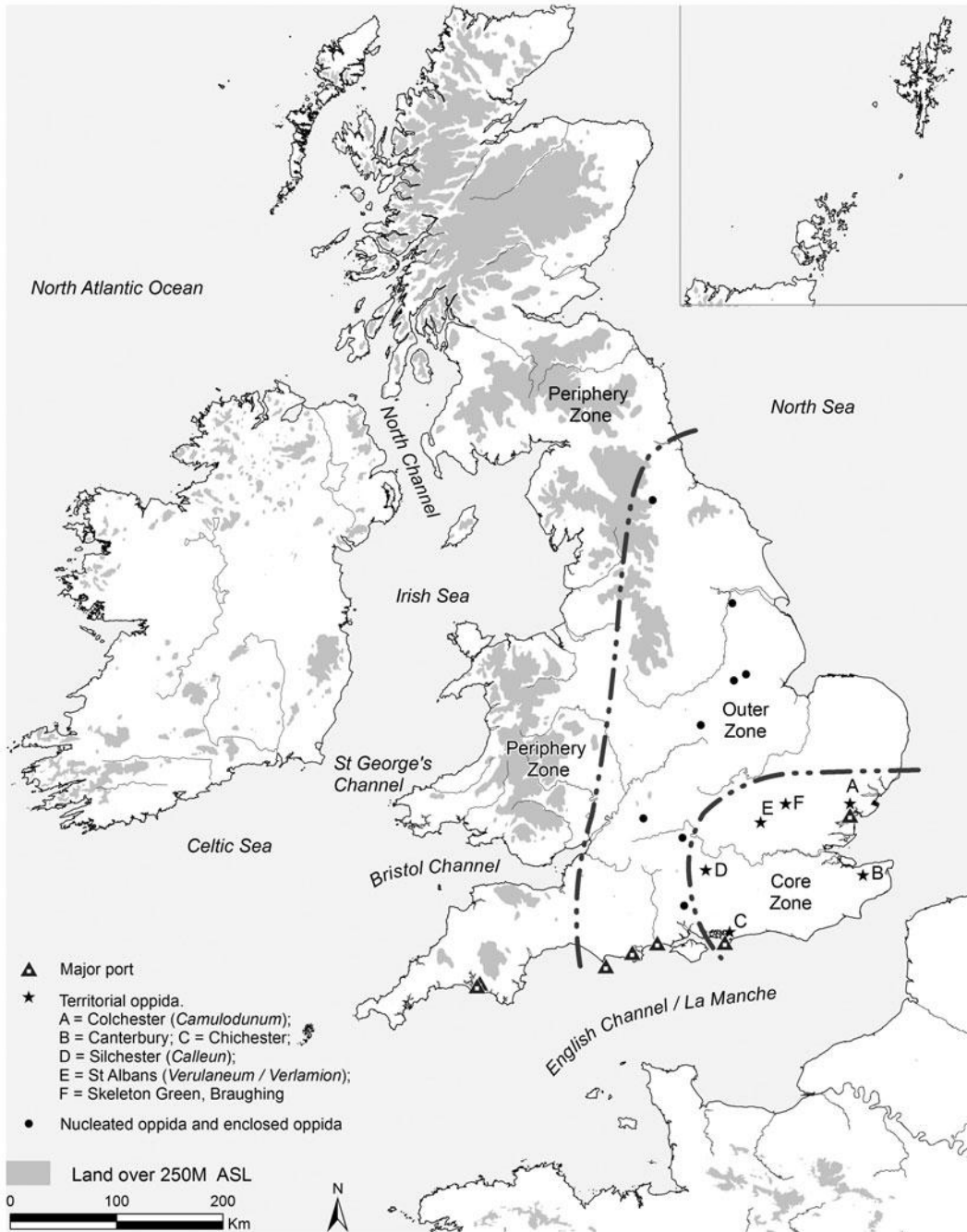


Figure 115 Map showing the main social divisions in Britain during the early first century AD, and the location of the main oppida and ports. [After Haselgrove 1982, fig. 10.6 with additions]

based on what is sometimes referred to as a World Systems Model. People living in all three areas at the time undoubtedly saw themselves and their communities at the centre of their own world. Indeed, in a sense, each zone was its own world according to what we know of population dynamics and regional genetic trends. Using studies of DNA in modern populations Stephen Oppenheimer has postulated that in the early first century AD two genetically and linguistically recognizable populations can be identified in Britain, both with roots stretching back several millennia. One was a Germanic group in lowland south-eastern Britain (essentially Haselgrove's Core and Periphery zones) with close kinship links across the Channel to northern France, the Low Countries, and southern Scandinavia. Their native tongue lay within the West Germanic branch of Indo-European languages and was ancestral to English (something like Dutch, Flemish, or Frisian) although some may also have spoken Latin. Second was the Celtic group along the Atlantic seaways and highlands of western Britain (Haselgrove's Outer Zone) whose ancestry lay in Spain, the Basque Country, and western France, and whose native language was Gaulish, a form of Brythonic Celtic.

## THE CORE ZONE

The Core Zone lies around the lower Thames Valley, including Kent, Surrey, Sussex, London, Essex, Hertfordshire, and parts of Buckinghamshire and north Hampshire. Prior to the arrival of Caesar, this area was closely in touch with the Continent not so much through trade as through providing help to the Gauls in their fight against Rome. John Creighton has also suggested that some British princes were taken as hostages to Rome where they were educated in Roman ways before returning home with a taste for Roman culture which they used as a means of creating social distance between the ruling dynasties and everyone else. It was mainly through these encounters supported by trade and exchange links that the earlier Gallo-Belgic series coins found their way to Britain.

### *Coins and trade*

The appearance of Gallo-Belgic coins early in the first century BC prompted the development of local copies, first as high denomination issues in gold, but later lower denominations in silver. Exactly how these were used is not clear, but John Collis has suggested that two levels can be seen. First, a high-value series used for high-level transactions, storage of wealth such as might be imagined with the payment of mercenaries, and payments such as bride wealth or tribute. Second, at an altogether different level, a low-value coinage probably for everyday transactions. Colin Haselgrove goes further in suggesting that coins may have been used for the movement of goods or services across the established boundaries of existing exchange practices, especially between different spheres of exchange so that goods and produce could be liberated for use in trade with Rome.

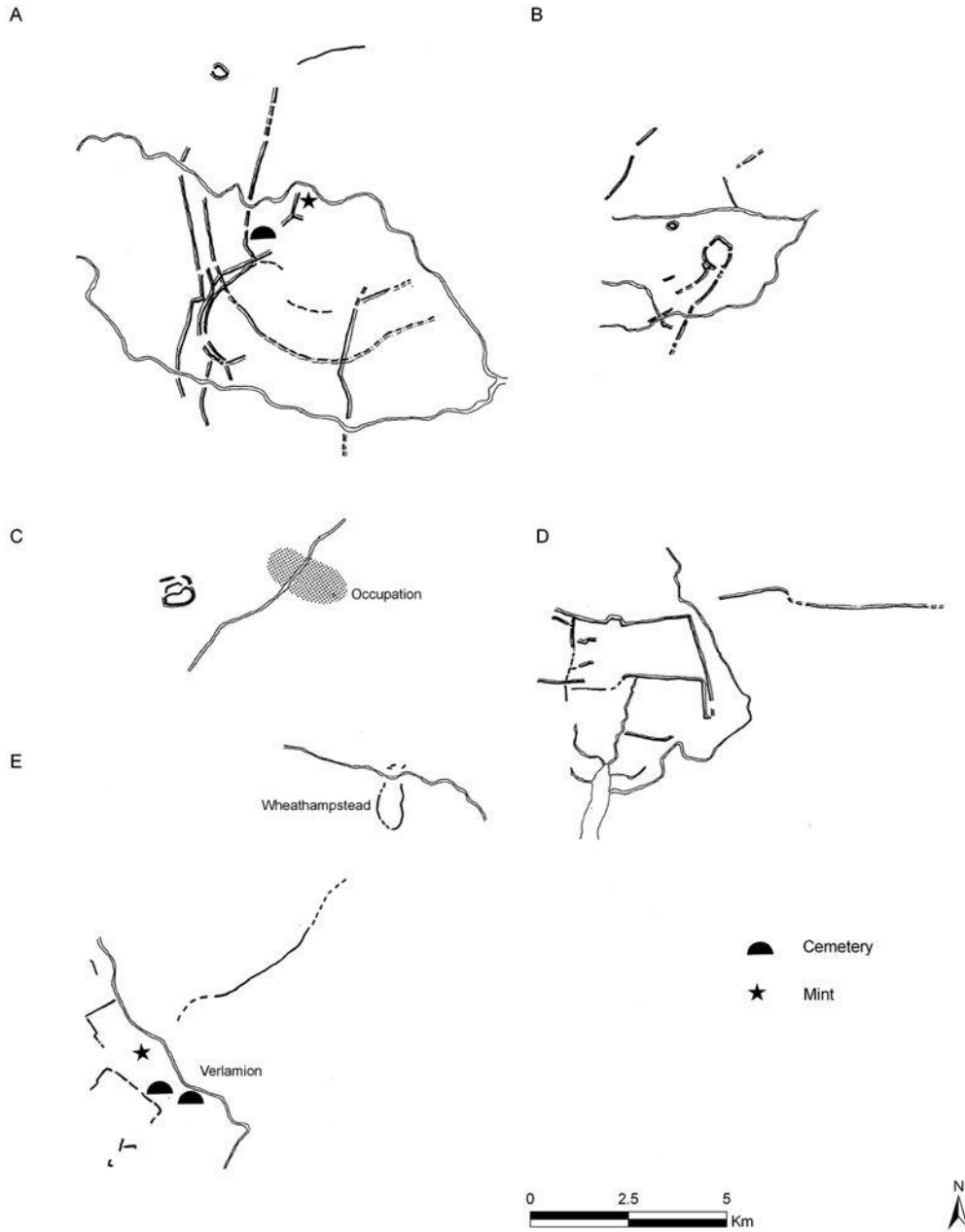
After 50 BC, the Core Zone was closely linked to the Continent through trade which increased in volume towards the Conquest. Middlemen may have been responsible for carrying out the transactions and transporting goods from the classical world to Britain and vice versa. By this time trade in the sense that is implied by the use of the word today probably prevailed. Ports were established and became the focus of transactions. Colchester, Essex, was certainly an important centre for trade, although little is known of the waterfront arrangements. Selsey Bill, West Sussex, might have been another such place, but little investigation has been undertaken here.

### **Settlement**

Settlements continued to develop along the lines established in the fifth to first centuries BC. Farmsteads and villages were the main centres of occupation, some enclosed and some not. However, a few settlements stand out as being rather different from the others (116). They are generally much larger and tend to be situated in river valleys. They are richer in terms of traded artefacts than contemporary small sites, suggesting that the occupants had greater involvement in foreign trade. Ten such sites are currently recognized: Braughing/Skeleton Green, Hertfordshire; Baldock, Hertfordshire; *Verulamium* (St Albans), Hertfordshire; Welwyn, Hertfordshire; Bulbourne Valley, Hertfordshire; *Camulodunum* (Colchester), Essex; Canterbury, Kent; Bigbury, Kent; Silchester, Hampshire; and Chichester, West Sussex. These sites are generally called territorial ‘oppida’ in deference to a term used by Caesar in his commentaries, although whether he was actually referring to such settlements at the time is debatable.

The main features of these territorial oppida sites are clear enough. They are generally large – Skeleton Green, for example, covered over 100ha at its height – and most are seemingly post-Caesarian foundations. They seem to have been built in areas that were previously thinly occupied as if opportunists were establishing novel settlements with associated new lifestyles. Large earthworks or dykes of various sorts define areas within oppida and radiate from them, although the dating and purpose of these is often far from certain. Territorial oppida are not single occupation sites but more often clusters of separate components, some of which can be distinguished from each other according to the kinds of activities undertaken within them. Most have an accompanying small hillfort or hillslope enclosure nearby, perhaps a high-status residence for the ruling family.

A great variety of different activities were undertaken at territorial oppida. At *Camulodunum* metalworking, coinmaking, potting, and various other industries were distributed around the occupation area. Rich burials and extensive cemeteries are frequently found nearby (see below). As yet, few large areas within these oppida sites have been examined in detail, the single most extensive investigation being at Silchester where excavations directed by Michael Fulford have examined a significant slice of the central area to reveal a town-like place with a regular grid of streets, narrow alleys dividing plots, water supplies from wells and springs, a mint issuing its own



**Figure 116** Ground plans of territorial oppida of the late first century BC and first century AD in the Core Zone. A: Colchester (*Camulodunum*), Essex; B: Silchester, Hampshire; C: Canterbury, Kent; D: Chichester, West Sussex; E: St Albans (*Verulamium*), Hertfordshire. [After Megaw and Simpson 1979, figs. 7.16 and 7.17; Cunliffe 2004, figs. 7.10, 7.11, 7.15, 7.18 and 7.19; Saunders and Havercroft 1982, fig. 14]



coins, and extensive evidence for imports of luxury goods from the Continent. The settlement was probably founded by Commius, leader of the Gaulish Atribates who fled to Britain after falling out with his Roman allies in 50 BC, and as such really would represent an innovative kind of settlement populated initially by refugees and asylum seekers.

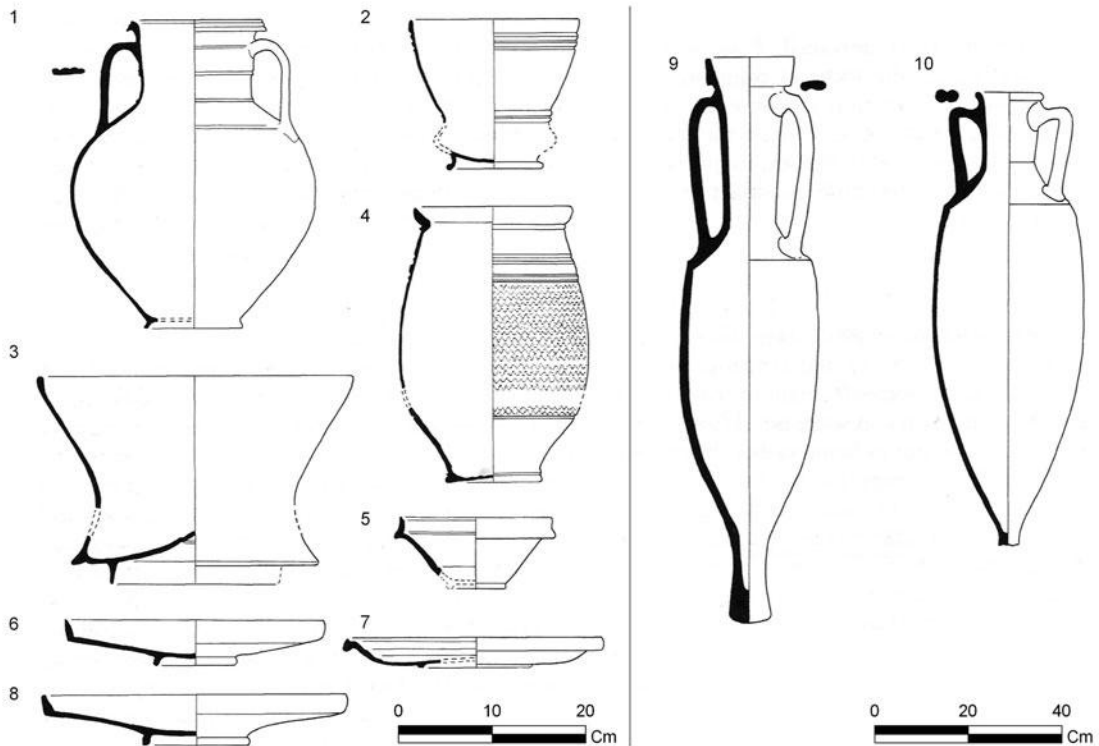
At most territorial oppida there is some evidence for rectangular buildings, perhaps in imitation of houses fashionable in the Mediterranean or in Gaul after the Conquest, and, as at Silchester, there is evidence for planning in the layout of these sites with consistent alignment of plots and buildings. To what extent this could be construed as urbanization is a matter for debate, but it is notable that all the territorial oppida become Roman towns of one sort or another after the Conquest, presumably in recognition of their nodal position in the economic and political organization of the area they served.

Crafts and industries focused on oppida, although were not exclusively undertaken at such sites. Very fine objects were produced, and renewed inspiration from the Continent allows the identification of heavy La Tène III influences on the design and decoration of objects. Technical innovations were also adopted in the Core Zone, particularly the use of the high-speed potter's wheel for the production of a wide range of new vessel forms including pedestalled jars, beakers, carinated bowls, and many cups and bowl forms. Copies of imported pots were also made. Coin production was widespread at oppidum sites, and clay flan-moulds for producing standardized metal blanks are fairly common finds. In Kent, potin coins (silver-bronze alloy) were made in strips by forming a two-piece clay mould over papyrus blanks and then inscribing the design in the clay before casting.

Evidence that the oppida were heavily involved in trade and commerce may be found in the fact that small denomination coins are more common at such sites than the larger denomination issues which John Collis has shown cluster on the rural settlements round about. Some oppida may even have been located on the edge rather than at the centre of their hinterlands to facilitate trade.

### ***Luxury imports and traded exports***

The range of imports brought into the Core Zone was far greater than at any previous time in pre-history, and seems to reflect the imitation of certain Roman ways of life (117). Of the objects which survive archaeologically, the greatest proportion relate to eating, drinking, and feasting. Wine, imported in amphorae (Dressel IA and IB forms), from Italy and the south of France was brought alongside fish products and olive oil, also in amphorae (Dressel forms 6–11 and 20) from Spain. Fine pottery included Gallo-Belgic types in *terra nigra* and *terra rubra*, especially platters, cups, and beakers; fine red glossy Arretine pottery from Italy and central Gaul; and central Gaulish micaceous wares. In the years immediately preceding the Conquest glossy red Samian ware, so familiar from Roman sites, began to appear in this country. Metal vessels, including silver cups, bronze flagons, bronze bowls, and strainers, probably of Gaulish or



**Figure 117** Imported luxury goods of early to mid first century AD date from the Core Zone. 1–3, 6 and 8: Central Gaulish wares; 2, 4 and 5: *Terra Rubra*; 7: *Terra Nigra*; 9: Dressel I amphora; 10: Dressel 2–4 amphora. 1, 6 and 8 from Welwyn Garden City, Hertfordshire; 3–5 and 7 from Skeleton Green, Hertfordshire; 2 from Gatesbury, Hertfordshire; 9 and 10 forms as found in Britain based on *Camulodunum*, Essex. [After Partridge 1981, figs. 77 and 78; Stead 1967, fig. 8; Hawkes and Hull 1947, plates 69 and 70]

Italian manufacture are also known. In addition to this food, wine, and table ware, other luxury goods include a set of glass gaming pieces, a medallion of the Emperor Augustus made from a cut-down denarius mounted in a frame, and even a bronze table.

Access to imported luxuries appears to have been restricted to a high level within society, with only some of the pottery, amphorae, and personal ornaments like brooches finding their way down the scale to low-order farmsteads. Most imported objects may be regarded as prestige items, and it is notable that feasting and drinking rituals appear so clearly at this time, following traditions established during the earlier first millennium BC if not before. Clearly, such rites were still considered important in maintaining and reinforcing the social order. Classical writers record that strong drink, principally wine and beer, was consumed during feasting sessions, which could last for days on end, and that brave warriors were honoured with the finest portions of meat at these ceremonies.

Archaeological evidence for goods exported from Britain is less easy to identify than the luxury goods which were imported. However, the writer Strabo (64 BC–AD 21) provides a list, mostly of raw materials and resources which would have been in short supply at the heart of the Roman Empire: corn, cattle, gold, silver, hides, slaves, and hunting dogs. Most of these could not have been found within south-eastern England, and must therefore have been brought in or acquired from further afield perhaps through trade, alliances, or organized raiding. Slaves in particular may well have been obtained through raids northwards and westwards, and it is notable that gang-chains or neck shackles have been found at three sites in the Core Zone – Barton, Cambridgeshire; Bigberry, Kent; and Sheepen, Essex – and one at Llyn Cerrig Bach, Isle of Anglesey, in the Outer Zone. Salt was produced in the Core Zone along the Essex coast especially and, as Elaine Morris has shown, must have been a widely traded and valuable commodity at this time.

### ***Burials***

Burials become a prominent feature of the archaeological record in the Core Zone from about 40 BC and reflect changing burial practices. Many of the most richly furnished are found near oppida, and it is characteristic of rich burials in the Core Zone that imported luxury goods accompany the deceased. Cremation was the preferred rite.

North of the River Thames, in Catuvellaunian territory, a series of especially rich burials have been recognized, known as Welwyn graves after excavated examples at Welwyn Garden City and Welwyn, Hertfordshire. Characteristically, these comprise a deep grave pit in which the cremated remains of the deceased were heaped or scattered on the floor together with supplies of food and wine and the accessories required for its consumption. At Welwyn Garden City, one of the richest of the group contained a silver vessel, two bronze vessels, four wooden vessels with metal fittings, five wine amphorae, a Roman Central Gaulish flagon, two imported Central Gaulish platters, 33 other pots, 24 glass gaming pieces, 6 bead/bracelet fragments, a bronze strainer, a bronze nail-cleaner, 46 bronze headed studs, an iron knife, a wooden board and other objects with iron fittings and a straw mat. Not represented in this grave, but well known from others, are iron fire dogs, often lavishly ornamented with animal heads, and probably once part of the hearth furnishings in the house of the deceased.

Excavations at Folly Lane, St Albans, Hertfordshire, revealed what seems to be a royal grave, perhaps that of the son of Cunobelin or a member of the ruling Catuvellaunian family who died at around the time of the Roman conquest or soon after. Here it seems that initially the corpse was laid on a couch in an underground burial chamber, surrounded by rich belongings, and people may have viewed the body in this setting. Later, perhaps days later, the body was removed and cremated while an orgy of destruction was wrought on the contents of the burial chamber so that everything was broken or smashed.

To the east, in Trinovantian territory, comparable rich burials are known around the territorial oppidum at *Camulodunum*, Essex. One of the richest is at Lexden, where a large barrow over 22m in diameter was found to cover an enormous burial pit some 8m long. Within the pit was a cremation burial, wine amphorae and other vessels, a bronze table, a pedestal for a statuette, a series of bronze figures, bronze embossed plates, studs, hinges and other fittings, silver decorative attachments, bronze mail with silver studs, the silver medallion of the Emperor Augustus mentioned above, and the handle from a large crater or wine-serving vessel. Significantly, many of the objects at Lexden appear to have been deliberately broken before deposition. Other rich burials have been found associated with a series of five interconnecting ditched enclosures at Stanway. One of the rich burials excavated here in 1996 was that of a doctor buried in the AD 50s in a substantial pit grave. Perhaps in symbolic recognition of the relationship between life and a game of chance, a gaming board had been placed on the floor of the grave, open and in play. The doctor's cremated remains were deposited on top in a bag, and alongside was a set of medical instruments including tweezers, needles, retractor, forceps, and scalpels.

More typical burials for seemingly ordinary people in the Trinovantian territory were found at Maldon Hill Farm, Essex, where excavations in 1989 revealed a rectangular ditched enclosure bounding a cemetery used by a small family group in the late first century BC that included three cremations in pots.

South of the Thames, in the territory of the Cantiaci, cremation cemeteries represent the most widespread tradition, well represented at the two large cemeteries of Aylesford and Swarling, both in Kent. Here the ashes of the deceased were usually buried in, or with, a wheel-turned ceramic urn or other container. A wealth/social differential is evident in the nature of the goods buried with the ashes. Simple graves contain nothing but the ashes and a vessel of some kind, but many were provided with personal ornaments and trinkets. In the richest graves the ashes were buried in or with wooden buckets covered in decorated bronze plates, with other bronze vessels, strainers, ladles and jugs set round about. These items were all connected with wine-drinking and imply some symbolic link between red wine and blood as an essential part of life. At Westhampnett, West Sussex, more than 160 cremations were excavated during the upgrading of the A27 trunk road, most of them arranged in a circular spread that Andrew Fitzpatrick suggests may somehow mirror the cosmological referencing of the standard roundhouse of the later first millennium BC (see Chapter 7). In practical terms it seems that corpses were first displayed in small shrines before being cremated, the square form of the shrine perhaps echoing the shape of earlier excarnation platforms.

Inhumation burials are also known south of the Thames. At Mill Hill near Deal, Kent, extensive excavations revealed two cemeteries. The first contained 28 graves, mainly extended inhumations, including six children and two graves where men were buried with their horses adjacent. A unique find was a warrior buried with a sword and shield in the normal way but here wearing a bronze crown or headdress of some kind as well as a belt with an ornate clasp decorated with coral inlay. A second cemetery comprising 14 graves, including two cremations, lay nearby. Associated with these cemeteries was a rock-cut shaft forming a 3m deep subterranean shrine with a stepped profile. Originally, there may have been a pool in the bottom and room

enough for three or four people to visit at a time. In the fill of the shaft was a small statuette, perhaps the guardian spirit of the place, although exactly how it was used is not known. Broadly similar shafts and wells are known elsewhere in southern Britain, but the closest parallel for this structure is the rock-cut shaft at Mine Howe near Tankerness, Orkney Islands (see Chapter 7).

Inhumations under barrows are also known south of the Thames, and at Brisley Farm near Ashford, Kent, two small square barrows each covered a warrior grave, one of them accompanied by a butt beaker from the Amiens region of France dated to between 10 BC and AD 10.

Within the Core Zone as whole about a dozen warrior burials are known, seemingly adult males equipped with sword and shield. Some may be people fleeing the Romans in Gaul; others were no doubt local heroes. A handful of burials in which the deceased, mainly females, are accompanied by a mirror have been found around the edge of the Core Zone at Chilham Castle, Kent, with a cremation at Pegsdon near Shillington, Bedfordshire, and at Latchmore Green near Silchester, Hampshire. More unusual was a 'spoon-burial' found at Mill Hill near Deal, Kent, where a pair of bronze spoons, one with a plain bowl and one with a cross and central circle inscribed in the bowl, may represent specialized equipment for performing cult rituals.

### ***Rivers, wet places, and shrines***

The ritual interest of rivers and wet places continued and much fine La Tène III metalwork has been dredged from the River Thames, including a fine shield from Wandsworth and the well-known bronze horned helmet from Waterloo Bridge, City of London. But the influence of the water cults may have been waning because, in keeping with the increased interest in Roman traditions, shrines or temples become more numerous from the later first century BC and appear to have provided an alternative context for the deposition of fine and valuable objects, particularly coins and personal ornaments such as brooches. Circular temples have been explored at Kelvedon, Essex, and Hayling Island, Hampshire. A square temple with a central cella is known at Heathrow, Hillingdon, discovered during the construction of the airport in 1944 and now beneath the east end of the northern runway. It was probably built in the late second or early first century BC. Among the objects found at the Hayling Island temple were over 90 coins, of which 22 were Gaulish imports, bronze horse harness, imported pottery, brooches and fragments of four speculum hand-mirrors manufactured in Italy in the early first century AD.

Ritual shafts were used in the Core Zone with ten examples recorded by Gerry Wait, most with collections of animal bones and pottery deposited within them in considerable quantity. Some may be connected with *viereckscanzen*: rectangular enclosures used as a setting for ceremonial feasts and associated rituals. An example at Brisley Farm, Kent, lay adjacent to the two barrows covering warrior graves discussed above, its ditches full of animal bone and broken pottery resulting from several episodes of feasting. Martin Pitts has emphasized how drinking vessels and tablewares were selectively deposited in pits during the first centuries BC/AD, confirming written sources suggesting that wine and beer were consumed at communal events. How it all worked is

not exactly clear, but Gillian Carr has shown that body and facial painting and tattooing was an important element of creating personal identities through the first century BC and beyond, and that even by modern standards some of the people at these feasts may have looked rather scary.

## THE PERIPHERY ZONE

Westwards and north-westwards of the Core Zone is a wide peripheral area stretching from the south coast in Hampshire and Dorset northwards to Yorkshire. Communities in this broad band of land were relatively unaffected by Caesar's visits to Britain, except that they may have rallied round their south-eastern neighbours against the Romans and some of their leaders may have been involved in the pact of allegiance with Rome. Whatever the case, from the mid first century BC onwards this zone appears to have been indirectly involved in trade with the Continent through south-eastern Britain, probably acting as suppliers and producers of goods and materials for which they were paid in coinage and in a few of the luxury items such as fine pottery and wine which were more widely available in the Core Zone. This disparity in the availability of imported luxury goods between the two zones is more than might be expected if distance from the trading ports was solely the cause. In fact, the character of the goods present in the two zones is quite different, with only the most commonly available forms being represented in the Periphery Zone, and the kinds of contexts in which goods were deposited are different too.

### *Settlements*

Settlements in the Periphery Zone continued to develop from systems established in earlier centuries, with the number of small enclosures and farmsteads increasing and a slight tendency for nucleation and the addition of boundary earthworks to otherwise unenclosed sites. But this was not universal and distinct sub-regional trajectories are evident. One explanation for this may be that, when goods for export could not be acquired by peaceful means, raids were organized to secure supplies. Barry Cunliffe has noted that in Wessex and the upper Thames Valley many farmsteads which until the first century BC were undifferentiated in their internal structure changed in form to comprise a cluster of separate compounds forming a cohesive unit sometime after the first century BC.

In the hillfort-dominated sectors of this zone many of the larger centres were all but abandoned. At Maiden Castle, Dorset, the late first century BC saw the abandonment of the earlier street plan, a movement of population out to the surrounding farmsteads, and the concentration of occupation in the hillfort itself focused in the eastern half (118). Similarly, at Danebury, Hampshire, relatively slight occupation was evident in the first century BC compared with earlier phases at the site, and it is possible that this particular hillfort simply became a refuge at times of

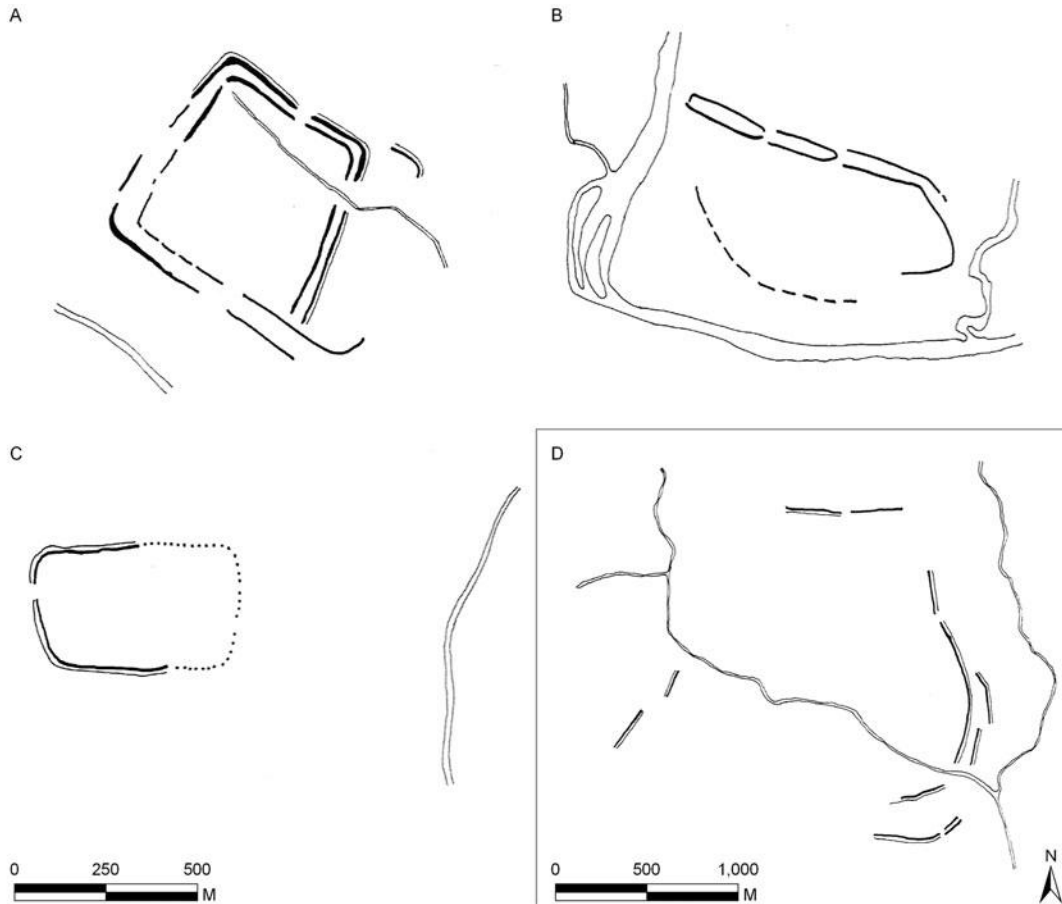


**Figure 118** Aerial view of the massive multi-period hillfort at Maiden Castle, Dorset. [Photograph courtesy of West Air Photography, Weston-super-Mare. Copyright reserved]

danger, or a site of religious importance only. At the same time, settlements in the surrounding region defined their boundaries with substantial ditches.

Beyond Wessex continued use of hillforts seems to have been more common, especially those situated in close proximity to good communications routes, among them Salmonsbury, Gloucestershire, beside one of the main north bank tributaries of the upper Thames leading into the agriculturally rich Cotswold uplands.

In southern and eastern parts of the Periphery Zone various oppida-like sites were established, for example at Winchester, Hampshire; Leicester; Grim's Ditch, Oxfordshire; and Bagendon, Gloucestershire (119). These are generally similar to the oppida of the Core Zone, although smaller in size and usually more fully enclosed; they are known as enclosed oppida. Like the territorial oppida, they seem to have been established in what were effectively gaps in the local



**Figure 119** Ground plans of nucleated oppida and high-status enclosed settlements occupied during the first century BC and first century AD in the Periphery Zone. A: Dyke Hills, Oxfordshire; B: Salmonsbury, Gloucestershire; C: Winchester, Hampshire; D: Bagendon, Gloucestershire. [After Megaw and Simpson 1979, fig. 7.19; RCHME 1976, op. page 19 and op. page 7; Cunliffe 2004, fig. 15.38]

settlement system. J D Hill sees such developments as the result of people or communities marginalized within existing society breaking out to create something new and different. These dynamic groups that were open to new ideas established distinctive settlements in which they could adopt and develop exotic or foreign habits. Tom Moore suggests that the morphology of sites like Bagendon implies an involvement in new kinds of activity such as large-scale horse-rearing. As previously noted, the inhabitants of these sites were closely involved in trade with south-eastern Britain, and quantities of imported pottery and amphorae are found, although in appreciably smaller quantities than in the Core Zone.



In the upper Thames Valley and eastern Cotswolds occupation continued at many existing settlements. At Yarnton, Oxfordshire, for example, excavations by Oxford Archaeology revealed only a gradual drift in occupation during the later first millennium BC, although from the first century BC onwards the existing fields seem to have been better manured and weeded while new fields were created on wetter ground and there was a greater focus on autumn-sown crops. Numerous banjo enclosures were constructed on the higher ground of the eastern Cotswolds, known through aerial photography but as yet rather poorly investigated.

In midland and eastern England many village-like settlements continued in occupation, and, as with the hillforts and enclosures in the south, became involved in trade with the Core Zone. Dragonby, Lincolnshire, for example, in close proximity to good iron ore reserves, began in the third or second century BC but expanded rapidly in the first century BC, ultimately to cover about 8ha when pottery similar to that circulating in the Core Zone was imported to the site. David Knight has suggested that population growth was largely responsible for the expansion of agricultural land onto the claylands of the east Midlands and the enclosure of many existing settlements on the more fertile lands round about. The most northerly enclosed oppidum is at Stanwick, North Yorkshire, a high-status settlement covering 300ha with more than 10km of massive earthworks (120).

In Norfolk, many existing settlements were enclosed during the first century BC and small hillforts were built around the edge of good-quality agricultural land perhaps to protect it. Snettisham, Norfolk, seems to have been an early centre of political power, replaced on the eve of the Roman Conquest by Thetford.

The old port at Hengistbury Head, Bournemouth, and other south-coast harbours were not totally eclipsed by the shift in trade to the south-east, and they continued to be active through the first century BC and early first century AD. To their number was added Ferriby, North Lincolnshire, in the Humber Estuary, which must have been providing direct access to continental markets for inhabitants of the Periphery Zone. The position of some of these trading ports on the coast at the junction between different zones has been noted by Neil Sharples and others who suggest that exchange centres may have been liminal places on the extreme edges of territories where local rules and conventions did not apply.

Economically, a change can be seen at many sites with a decline in attention to sheep husbandry, a fairly constant use of pigs, and a greater emphasis on cattle and horse. At Bury Hill, Hampshire, around 48 per cent of the animal bones present in first-century BC levels were horse, which taken with the quantities of horse-harness and vehicle fittings from the site suggested to Barry Cunliffe that chariots and their draft teams may have been produced at the site. Horses were certainly key elements of elite society's prestige indicators, useful also in war, so much so that Caesar (*Gallic Wars* IV) records Cassivellaunus as being able to call on 4,000 chariots to oppose the Roman legions in 54 BC. Plant use also changed, with oats and peas making an appearance, and spelt wheat and six-row barley being cultivated fairly extensively.

A



B



**Figure 120** Brigantian multi-phase settlement at Stanwick, North Yorkshire. A: Enclosure earthworks on the north-eastern side. B: Excavations in 1985 in the Tofts near the centre of the site showing drainage gullies of two roundhouses, the one on the right may have been connected with metalworking. [Photographs (A) by Timothy Darvill and (B) courtesy of Colin Haselgrove. Copyright reserved]

### ***Production and exchange***

Coins, both large denomination gold and silver issues and small denomination bronze issues, were produced by communities living over much of the peripheral zone from Dorset to Yorkshire. The prototypes included both Gallo-Belgic and Armorican issues, and they circulated over wide areas, although mostly within the Periphery Zone itself. Minting was undertaken at a variety of sites, but mostly the larger hillforts, enclosures and village settlements. Coin output was probably rather less than in the Core Zone until at least the later part of the first half of the first century AD, when output seems to have increased and perhaps spread to parts of the Periphery Zone which did not previously use coins.

The production of fine metalwork in well-established Celtic traditions reached a peak in the first centuries BC/AD in the Periphery Zone. Elaborate bronze horse fittings, weapons, ornaments, brooches, and mirrors were among the goods produced, often embellished with intricate curvilinear designs. At Stanwick, North Yorkshire, a very well-preserved iron sword in a delicately carved ash wood scabbard was found in a waterlogged section of ditch. The production of iron was widespread through the Periphery Zone. At Prior's Hall near Corby, Northamptonshire, innovative shaft-furnaces were used to smelt local iron ore from c.100 BC.

The use of gold and silver became more common at this time, and perhaps the height of craftsmanship in these metals are the torcs found almost exclusively in the Periphery Zone, especially in East Anglia, and the twisted neck-rings from other areas. Some of the most famous examples, from Snettisham, Norfolk, are made of several strands of electrum wire twisted together, the ends of which were inserted into large hollow ring terminals splendidly decorated in the La Tène art style.

Salt was produced at coastal salterns along the south coast, in the Severn Estuary, the Lincolnshire Fens, and inland at Droitwich, Worcestershire, and Nantwich, Cheshire. All the production centres had extensive distribution networks that can be traced through the distinctive ceramic vessels in which raw salt was traded. Far more salt was produced at these centres than could have been used domestically, suggesting that much was given over to the preservation of meat and perhaps fish.

### ***Burials***

In contrast to the Core Zone, fine indigenously produced objects were used as grave goods in the Periphery Zone rather than imported objects, which seem mostly confined to high-status settlements. Three main burial traditions can be identified, again representing developments of earlier traditions.

First is the warrior grave tradition. In this the burial rite was inhumation, and involved only the adult male accompanied by weapons, usually a sword, spears, a shield, and a knife. At Owslebury, Hampshire, the warrior was estimated to have been aged about 40 to 50 years at



**Figure 121** Grave goods from the rich mid first century AD graves in the Birdlip Cemetery, Gloucestershire. The two semi-circular bronze bucket mounts (bottom right) probably derive from a male grave, the remaining objects were found with an adult female during quarrying in 1879. [Photograph courtesy of Malcolm Watkins (Gloucester City Museum). Copyright reserved]

death, and in addition to the usual range of grave goods already listed he had a tinned or silver bronze belt hook dated to about 25–1 BC. At least 17 other warrior burials are known, spread widely from Dorset to Lincolnshire.

The second tradition comprises wealthy female graves, which are spread over roughly the same area as the male warrior graves, but are distinctive in containing personal ornaments, and usually a mirror. Inhumation was again the rule, sometimes in small cemeteries. One of the best-known such burial is in a cemetery of unknown size at Barrow Wake near Birdlip, Gloucestershire, overlooking the Severn Valley (121). The grave goods with this lady comprised a bronze mirror, a silver brooch, a bronze expanding bangle, a bronze animal-head-pattern knife handle with an iron blade, a small bronze bowl, a drop handle, a finial loop, tweezers, bronze rings and a collection of beads. A large bronze bowl had been placed over the lady's face in the grave. The other burials in the cemetery here were not accompanied by grave goods, except one individual who may have had a wooden bucket with bronze fittings.

The third tradition is mainly recognized in Dorset, the territory of the Durotriges, where the burial rite comprised crouched inhumations in small cemeteries of simple pit graves. Grave goods are generally poor, comprising one or more locally made pots, personal ornaments such as brooches or shale bracelets, and, more often than not, joints of meat.

By the eve of the Roman invasion the practice of cremation burial so common in the Core Zone was being adopted by some groups further west, but mostly only by those in close contact with groups in the south-east.

### ***Ritual and ceremony***

Interest in natural places, especially rivers, continued through the first centuries BC/AD in this Zone, with high-quality metalwork being deposited in considerable quantity. The Witham shield found in the River Witham, Lincolnshire, in 1826 dates to about 100 BC, and with its depictions of a boar and two mythical beasts is widely regarded as one of the finest pieces of craftsmanship of its time in Europe. Established shrines, some in hillforts, continued to be used, often with ongoing refurbishment – as for example at Danebury, Hampshire; Cadbury Castle, Somerset; and West Hill, Uley, Gloucestershire – while new examples were built as at Haddenham Site IV, Cambridgeshire. The deposition of fine metalwork as individual objects or hoards in pits or other places of concealment is widely represented. Some may have been hidden during times of unrest and simply never recovered, but most look to have been deliberately placed as offerings to the gods of the underworld, perhaps to bring protection, good fortune, success in battle, or the restoration of health. At Sedgeford, Norfolk, coins and a torc were found in a ritual deposit, but the most extensive example is at Snettisham, Norfolk. Here, 12 hoards of complete and broken metalwork, mostly gold, were found, each deposited in a small pit within an area devoid of occupation evidence but contained within a polygonal ditched enclosure covering around 8ha. Hoard F found in 1990 and dating to about 70 BC was the largest and seems to have been deposited in a bronze vessel: it includes pieces of at least 50 torcs, 70 bracelets, three ingots, and nine coins that altogether weigh 9.2kg. A hoard of ten gold objects found near Winchester in 2000 contains two imported Roman chain torcs, four brooches, two bracelets, and an ornamental chain linking two of the brooches; two sets of high-value personal ornaments that because of differences in size may have been a male and female ‘set’. The pieces were manufactured sometime between 80 BC and 30 BC and were deposited in a pit remote from any nearby settlement a decade or two later.

Most extraordinary is a find from Netherhampton near Salisbury, Wiltshire, where metal-detectorists found a hoard of about 600 items originally deposited within a rock-cut pit in the midst of an abandoned settlement. About a third of the finds are axes of various sorts, and many of the later pieces are miniatures of life-sized everyday items such as shields, cauldrons, and axes. What makes the collection unique is that it spans the period from about 2400 BC through to the time of its deposition around 100 BC, and suggests a long-term continuity of tradition that here came to a sudden end. The deposition of all these hoards is strongly reminiscent of pit-digging

traditions common in the fourth and third millennium BC, and the possibility must be considered that half-remembered aspects of what by the first century BC were ancient beliefs resurfaced among those clinging to traditional ways. It is a possibility supported by activity noted at a number of henges and henge enclosures across the Periphery Zone. At Stonehenge, Wiltshire, for example, pottery of the late first millennium BC indicates sporadic activity which continued into Roman times, while at Mount Pleasant, Dorset, and Durrington Walls, Wiltshire, small-scale occupation is represented by houses and scattered pits. At Mount Pleasant these activities involved the demolition of the stone cove.

Feasting may well have been widespread through the Periphery Zone as it had been in these same areas in earlier times. At Chiseldon, Wiltshire, a group of 12 bronze cauldrons were found in 2008, buried tightly packed together in a pit along with ox skulls. Perhaps they had been brought together in preparation for, or in consequence of, a great feasting event and were put into the pit to share the feast with the gods or as part of a solemn rite to seal and sanctify a special event in a borderland between societies.

Carved chalk figurines are known from the Yorkshire Wolds, where they are associated with rectilinear enclosures at Withernsea, Garton Slack, Fimber, and Wharram Grange Crossroads, all in the East Riding of Yorkshire. Some show what are clearly male warrior-figures naked except for a belt and a sword carried vertically in the centre of the back, just as found in some of the burials in the area, suggesting a local fashion. A collection of stone heads from Halby near Melton Mowbray, Leicestershire, may date to this period, and the great geoglyph of the Cerne Giant on a hillside near Cerne Abbas, Dorset, was considered by Stuart Piggott to be of this date.

## THE OUTER ZONE

Atlantic Britain forms the third zone distinguishable in the first century BC/AD on the basis of the extent of contact with the classical world through south-eastern England and its genetically different population. In fact, this zone had remarkably little contact with people beyond its borders and is notable for its continuity from earlier times rather than any marked changes. Adam Gwilt notes that to date only 32 coins from other parts of Britain and Gaul, together with just 12 Greek coins, have been found in Wales, mostly around the Severn Estuary. Nonetheless, the region has its own distinctive character and material culture which is equally scant further east. Classical writers have little to say about this part of Britain, but it is the distinctive and highly localized kinship-based societies arranged in numerous fiefdoms with no evidence of large central places right along the Outer Zone that can be glimpsed in the Irish Epics. As such it is easy to visualize such events as the feast prepared by Culann the smith at his fort to entertain Conchoghar the local chief, the dog being set to guard the ramparts while they ate, and the young Cú Chulainn, arriving late, dispatching the dog with a single sling-shot. And if these sagas do indeed provide a window on earlier times, then the Irish *túath* as a social unit with territorial connotations and a three-fold social hierarchy may be relevant to later prehistory in this zone. Homesteads were the

focus of communal activity and the household the centre of everyday life. Large social gatherings (the Irish *óenach*) provided the context for agreeing marriages, exchanging goods, passing judgments, debating new rules, and enacting relevant ceremonies to legitimate such things. In this the occasional hillfort and large enclosure may have played a role. More widely, though, Malcom Todd has noted that in this zone no coinage was issued by any ruler or dynasty to proclaim authority or reward allegiance, and any unity that existed must have been expressed through intangible culture and distinctive ornaments or decoration. One such group of ornaments found in eastern Scotland are the so-called Massive Metalwork represented in the form of large chunky bronze armlets, zoomorphic spiral bracelets, finger-rings, and strap-junctions. They represent personal adornments emphasizing local identity in a very particular way that contrasts with similar things made on a more modest scale in the Central British Metalwork tradition common from the Firth of Forth southwards.

### **Settlement**

From the first century BC settlements in the west of Britain tended to be enclosed and rather better defended than in previous centuries, perhaps in response to the threat of raids on stock and people from groups living to the east. In the south-west many rounds, multiple-enclosures, and cliff castles remained in use, and new examples were built. One such case is the Rumps, Cornwall, probably built about 100 BC and integral to a pastoral economy in the area.

A class of settlement that gained popularity during the later second century BC in the far south-west of Britain was the courtyard house. These comprise a paved central courtyard surrounded by rooms and byres, the whole complex being enclosed by a stout stone wall. Houses of this type are normally provided with garden plots and were often set within established fieldsystems. Some courtyard houses form substantial villages, as at Chysauster (122) and Carn Euny, Cornwall. Closely associated with the occupation of both these sites, and characteristic of most parts of Atlantic Britain from the first century BC onwards, are 'souterrains' or 'fogu'. These are underground passages, usually with one or more rooms leading off them. Most were stone-built, but excavations at Easter Moss, Stirling, revealed a timber-lined example suggesting that they may be more widespread than present evidence allows. Their function is uncertain but they could certainly have provided secure storage places for dairy produce and crops, acted as animal shelters, and perhaps even places of refuge during times of unrest. Ian Armit has suggested that in Scotland, at least, the majority are associated with open settlements, although there are certainly exceptions.

In Wales, familiar kinds of enclosure continued to be used and built though the centuries leading up to the Roman Conquest and beyond. In a series of excavations in south-west Wales by the Dyfed Archaeological Trust during the early 1980s, something of the density of settlement at this time may be glimpsed. Around Llawhaden, Pembrokeshire, in an area of only 5 square kilometres, at least 11 enclosures were still visible as surface earthworks, and several of them were



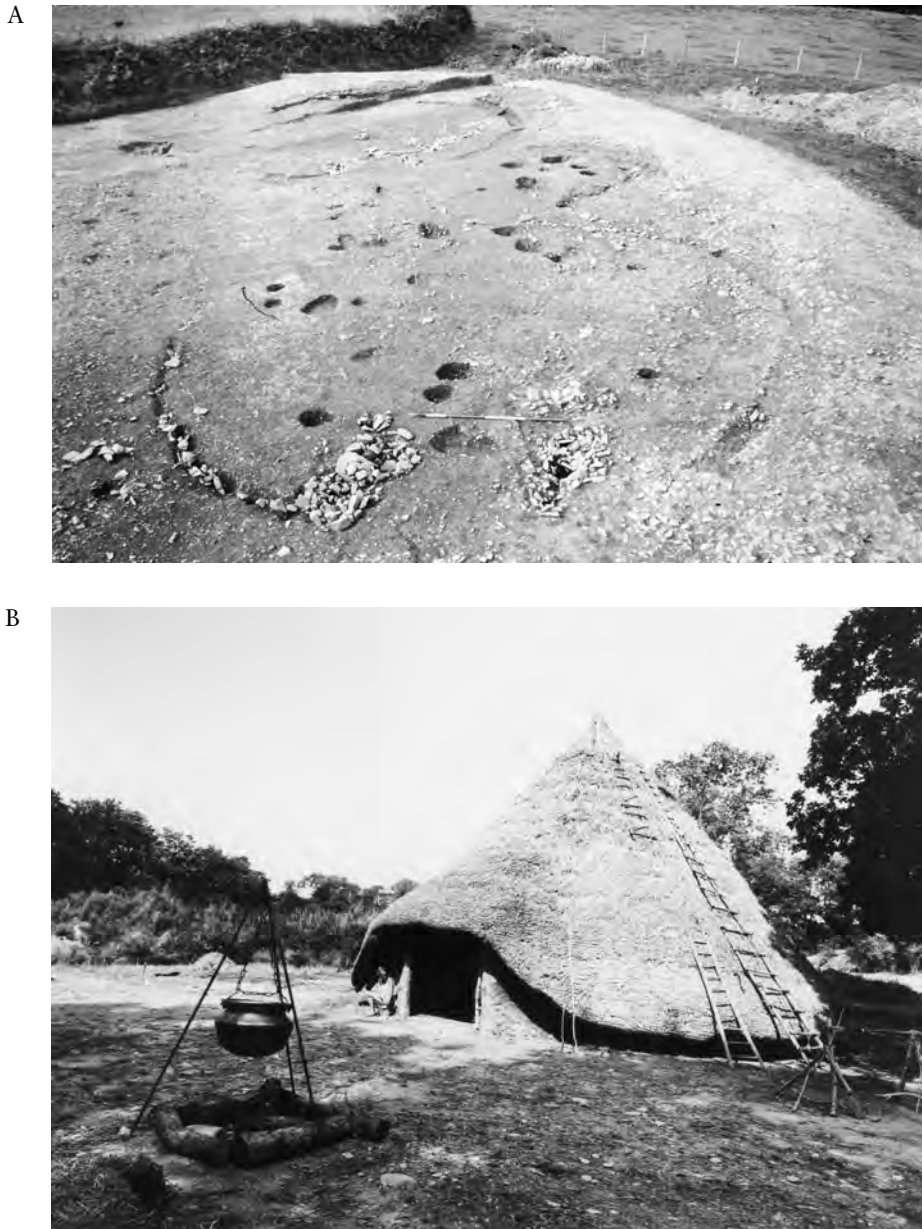
**Figure 122** Aerial view of the courtyard houses forming a small nucleated village at Chysauster, Cornwall.  
[Photograph courtesy of West Air Photography, Weston-super-Mare. Copyright reserved]

excavated (123). Two, at Dan-y-Coed and Woodside, lie within 300m of each other and were established soon after 100 BC. Both are heavily defended and would have been the residence of small family groups of mixed farmers. The reason for two sites so close together may be that inheritance rules allowed property and land rights to be divided equally rather than passed on as a complete unit (so called partible inheritance: Welsh *cyfran*). In North Wales excavations at Cefn Graeanog II, Gwynedd, revealed a long-lived settlement first established in the second century BC with a single roundhouse that developed into a more substantial farming settlement with two roundhouses within a rectangular enclosure soon after. Wheat and barley were grown by the occupants who were also engaged in extensive pastoralism on the surrounding hills.

In the far north the settlement pattern of hillforts, palisaded enclosures, duns, brochs, Atlantic roundhouses of various kinds, and fortified homesteads continued to be occupied and new examples built. At Port Seton, Edinburgh, the occupants of four roundhouses within a ditched enclosure used local coal as fuel from the first century BC, the earliest recorded instance in Britain.

Some of the impressively large broch towers continued to form focal points within fairly extensive settlements (124), but in general they become less monumental and more domestic during





**Figure 123** Late first century BC and first century AD settlements in the Periphery Zone. A: Woodside Camp, Llawhaden, Pembrokeshire. Two roundhouses have been revealed in the centre of the excavated area beyond which are the remains of the enclosing bank. Scales each total 2m. B: Reconstructed roundhouse at Castell Henllys, Meline, Pembrokeshire, based on evidence recovered during the excavation of the site. [Photographs courtesy of (A) Ken Murphy (Dyfed Archaeological Trust) and (B) Harold Mytum. Copyright reserved]

A



B



**Figure 124** Brochs in the Periphery Zone. A: Broch of Gurness, Orkney Islands; B: Dun Carloway, Lewis, Western Isles. [Photographs (A) courtesy of Bob Bewley and (B) by Timothy Darvill. Copyright reserved]

the first century AD. At Mousa, Shetland Islands, the drystone-built tower still stands nearly 20m high and is 12m across at the top; it stands on a promontory protected by a rampart across the neck with traces of several houses inside the enclosure around the tower. At Howe, Orkney Islands, there were six houses around the central tower before AD 35, all within a clay and stone rampart faced on the outside. It is likely that these tall brochs originally had several internal wooden floors and were roofed over as a tower house.

On the other side of the country Dun Carloway on Lewis, Western Isles (124B), must originally have been just as large as Mousa, but part of its outer wall collapsed during the early twentieth century AD, revealing its massive construction. On South Uist, Western Isles, extensive surveys and excavations show something of the landscape context of the brochs. Up until about 100 BC settlement on the island was highly nucleated and concentrated in just a few villages. After about 100 BC it became more dispersed, with 20 or 30 linear territories arranged in east–west strips across the island, each focused in social and agricultural terms on a wheelhouse. At Dun Vulan a broch was built in a marginal area in about 1 BC, and like other examples in the Hebrides was the dwelling of an overlord whose diet included cattle and pigs, whereas the economy of those living in contemporary wheelhouses focused on sheep. As in earlier times, the inhabitants of brochs were engaged in mixed farming, although since many are situated on or very near the coast the use of marine resources is also likely.

### ***Trade and exchange***

Trading links between the Outer Zone and areas to the south-east are poorly represented archaeologically. A few coins reached border areas, but they do not penetrate into the Peripheral Zone proper. A few fine objects such as the iron fire dog from Capel Garmon, Conwy, and the gold torcs from Netherurd, Scottish Borders, may represent traded commodities, but craftsmanship in the west was the equal of that in other areas. Products from workshops in western areas include tankards, weapons, horse-gear, and many of the other objects familiar from elsewhere. One explanation for the wealth of products is that metalworkers fleeing the Roman expansion settled in western areas beyond the reach of Roman arms.

### ***Ritual and burial***

Rivers, lakes, bogs, springs, and wet places remained the principal focus of ritual activity in the west throughout the first century BC/AD and indeed on into the early Roman period. At Llyn Cerrig Bach, Isle of Anglesey, a massive collection of objects including swords, spear-heads, horse-gear and chariot fittings, parts of bronze shields, a cauldron, nave hoops, tongs, part of a bronze trumpet, a set of slave chains, and various other fitments of uncertain function was found in a peat-filled lake in 1942–3. Another similar hoard, although more modest in size, was been

found at Tal-y-llyn, Gwynedd. As with earlier material, there is a high probability that some burials were deposited in the water with these objects, and they probably accumulated over a period of perhaps 100 to 200 years.

Burials in the Outer Zone in the first centuries BC/AD are not as uncommon as once thought. Cist graves are known in all areas, although dating remains a problem and soil conditions militate against the preservation of bone in many places. Ian Armit and Victoria Ginn have shown that in Atlantic Scotland the dead were ever-present among the living population. A small portion of the population were buried below the floors and in the walls of houses, displayed and stored around settlements, and may have played a key role in ceremonial occasions of various kinds. At Port Seton, East Lothian, a small cemetery of six inhumations dating to the early first millennium AD was excavated. More complicated was a burial at Hornish Point on South Uist, Western Isles, where the body of a child had been divided into sections and placed in four adjacent pits, which in two cases also contained cattle and sheep bones. At Alloa, Clackmannanshire, a male warrior aged 25 to 35 years was buried in a stone-lined grave together with his sword and ornate belt. At Dunbar, East Lothian, a stone-lined cist grave contained two burials, one disarticulated and associated with a pin and the other a warrior buried with a spear and sword.

A find made in 1984 in Lindow Moss, Cheshire, connects burial with interest in wet places. Workmen watching a peat-cutting machine found a human body (Lindow Man, or Pete Marsh as he affectionately became known to those who found him) well preserved in the waterlogged peat about 70cm below the present surface. Excavations under the direction of Richard Turner took place and subsequent forensic-style postmortem examinations revealed that the body was that of a man who died about 2 BC–AD 129. His last hours must have been a traumatic time, although interpretations of the events represented vary. Those who believe this to be a ritual killing suggest that he had been struck on the head and on the back while kneeling or standing, strangled with a garrote, bled through a cut to the jugular vein in the side of the neck, and then finally dumped in shallow pool face down. However, subsequent examinations by Robert Connolly have cast doubt on this interpretation and instead suggest that Lindow Man died in combat or during a violent robbery rather than through ritual sacrifice or a punishment for some crime. The examination of earlier records reveals that Lindow Man was not alone in ending his days in a watery grave; more than 85 other bog bodies from 50 sites in England and Wales have been found and a further 36 bodies from 16 sites in Scotland, although not all are later prehistoric in date.

In the Outer Zone there is also evidence for renewed interest in ancient sites, connecting with the ancestors, and presumably associating with or reinventing long-lost beliefs. Richard Hingley has noted especially the construction of houses in passage graves and long barrows, suggesting that by actively rebuilding the houses of the dead as the dwellings of the living these people may have deliberately reinvented monumental aspects of the past as part of active strategies relating to the creation of contemporary identity. At Howe, Orkney Islands, for example, a broch was built right on top of a passage grave, while at Pict's Knowe, Dumfries and Galloway, the ditches of small henge monument constructed about 3000 BC were recut in the first century BC/AD when

woodworking waste and broken wooden items, including a possible ard, were deposited in the ditch. A statue menhir from St Martin's, Isles of Scilly, bears comparison with examples on Guernsey, and may suggest the revival of earlier interests in standing stones.

## POLITICAL MANOEUVRINGS

In the 97 years between Caesar's visits to Britain and the Claudian invasion of AD 43, there were profound political changes both in Britain and in the Roman world which can be glimpsed from documentary and archaeological evidence. In Rome, the Republic finally came to an end in 31 BC with the deaths of Antony and Cleopatra after years of civil war and power struggles. Octavius was the only remaining man in power, and from 27 BC onwards he created the basis for the Roman Empire and was soon recognized as its first Emperor, Augustus. Thereafter control of the Empire was vested in the ruling family regulated through descent as successive Emperors came to power: Tiberius, Gaius (Caligula), and Claudius.

In Britain the treaties established between Rome and the chiefs from the Core Zone were variously upheld, at least during the life of Julius Caesar. Hostages had been taken by Caesar, and there are at least some suggestions that, when in trouble, afflicted chiefs called on Rome for help. Taking the distributions of coins minted by groups in the Core Zone and the Periphery Zone, together with documentary references and some backward projection of the names given to specific areas after the Roman Conquest, a crude political map of the name and territory of the main tribes and chiefdoms can be built up (125). In fact such a map is much more than a political map for it must relate to social, kinship, and alliance groupings, in a way that will never be fully understood.

Direct archaeological evidence for various kinds of personal engagements between people in Britain and the Roman world are starting to emerge, some rather hard to interpret. A grave found in 2008 during house-building at North Bersted, West Sussex, for example, was that of an adult male accompanied by pottery and iron fire-dogs but dressed with a decorated shield and what appears to be a Montefortino-type helmet of the kind that was standard issue to legionaries in the Roman Republic's armies from the end of the second century BC onwards. Similarly, at Hallaton, Leicestershire, excavations in 2000 brought to light a Roman cavalry parade helmet with silver *repoussé* decoration, dating to about AD 40. It lay on the edge of a small shrine yielding thousands of pig bones and more than 5,000 British coins. Could these pieces have been brought home by local men serving in the Roman *auxilia* on the Continent? Did the parade helmet belong to a Roman auxiliary officer stationed or visiting in a friendly kingdom before the Conquest? Or was it loot from a raid? Or a diplomatic gift to enhance the status of a local ruler?

Attempts have been made to devise a dynastic history of the main social units in this twilight period of prehistory, mostly from scant documentary sources. This has largely been grounded in a fundamentally imperialistic ideology narrating events from the Roman viewpoint, rather

# PREHISTORIC BRITAIN



**Figure 125** Map showing the estimated position and geographical spread of the main recorded tribal groupings in Britain at the time of the Roman conquest in the mid first century AD. [After Cunliffe 2004, figs. 9.1, 9.4 and 9.6]

than from the perspective of the communities in Britain. Such histories are therefore highly contentious in their detail, although two general points of interest can be glimpsed.

First, the known political geography of the immediately pre-Roman period broadly reflects the three archaeologically discernible zones in Britain, and the social structures proposed for each. In the Core Zone there are four or five named groups occupying relatively small areas and, according to the documentary sources, closely related yet in active competition. Beyond this in the Periphery Zone are perhaps another four or five groups each occupying a very much larger area. In the Outer Zone a large number of much smaller groups are defined, probably truly tribal units with individual kinship-based segments within them.

Second, it is clear from Caesar's accounts that the social groups in the Core Zone were fragmentary when he encountered them. Each acted relatively independently of the others, and while Cassivellaunus emerged as the leader (?king) of the Britons his elevation to this position may have been because of his previous prowess in battle rather than anything more formal. The social units which were encountered by Claudius, probably the four or five units which can be mapped, had clearly emerged out of the smaller units of a century earlier. Through various processes of conquest and alliance the Catuvellauni and the Trinovantes were at times united as a single unit, possibly by dynastic marriage and undoubtedly with considerable influence over the surrounding areas. Beyond the Core Zone a similar pattern of social development seems to have taken place too, and on the basis of the coins from East Anglia, for example, Derek Allen has suggested that the Icenii came together by the mid first century AD from at least three smaller units.

How power was handed down before the first century BC is not known; it may have been competed for, or it may have been inherited. By the time that coins were in use inheritance was practised in some areas. Tincommius, for example, claimed to be the son of Commius when he became leader of the Atrebates about 20 BC, and similar claims are made on the coinage of others. The titles of the leaders at this time also changed, perhaps in line with Roman nomenclature. Tasciovanus, leader of the Catuvellauni, for example, used the term *RIGONUS* on his coins, which is probably a version of the Latin *rex*, meaning 'king'.

What seems to have emerged in the Core Zone by AD 43 is a series of proto-states or kingdoms, heavily involved in foreign trade and with various formal and informal ties to the Roman Empire. Why these changes should have come about is less clear. At a general level, Morton Fried has noted that the proximity of an empire state to a rather less complex society causes the latter to react by federating groups into larger political units, something that seems to have happened in Britain. With reference to south-eastern England in particular, Richard Bradley and Ian Hodder have suggested that tensions between communities were reduced by increasing the social and political hierarchy so that reliance on neighbours was replaced by a reliance on the social, economic, and political centre. The emergence of oppida, and the expression of group identity with coins, were part of these changes in the hierarchy. At the top of the pyramid it was the control of foreign trade and relations with the Roman world – incidentally the biggest threat to the continued well-being of these groups – which bestowed power and prestige on the leaders. Children may even have been sent to Rome to be educated. The emphasis on imported objects as grave

goods would be a natural consequence of this. In contrast, in the Outer Zone control over production and redistribution, together perhaps with the old virtues of the warrior defending the community, remained the most important factor in maintaining the social hierarchy, and here grave goods focus on local products and weaponry.

## THE COMING OF ROME

The Roman invasion of Britain began in AD 43, but it was not unexpected and must be seen in the context of creeping Roman influence over several decades. Indeed, if the accounts of the invasion written down by Cassius Dio Cocceianus some 150 years later are to be believed, it was the increasingly hostile stance of the main British dynasty, the Catuvellaunian, that prompted the invasion and the annexation of part of Britain to the Empire. The death of Cunobelin about AD 40 and the accession of his more aggressive sons who were far from happy about earlier alliances with Rome perhaps made direct intervention timely before anti-Roman feeling became too strong. Political expediency by Claudius in adding to the Empire with a view to improving his popularity with the army, confounding his critics, and providing much needed revenue may also have been factors. Yet another consideration may have been the attraction of trading with Britain as a part of the Empire free from the tariffs imposed on trading with countries beyond the frontier.

The invasion itself was led by Aulus Plautius commanding four legions of the Roman army; about 40,000 men including legionaries and auxiliary troops took part, while a fifth legion was held in reserve in Gaul. The legions involved were the II Augusta, XIV Gemina, the XXth which had been drafted in from the Rhineland, and the IX Hispana which had come from the province of Pannonia, Yugoslavia, with Aulus Plautius.

The increased production of coins in Britain in the years before the Conquest may be related to paying warriors for participation in the defence of Britain, and it seems certain that some of the dykes and ramparts established round the oppida in south-eastern England were thrown up at this time as defensive works. Many are little more than dumps of soil (so called Fécamp style ramparts). A few hillforts such as Hod Hill, Dorset, apparently underwent last-minute refortifications of their entranceways in readiness.

Following conventional readings of Cassius Dio's accounts of the invasion, the Roman fleet is thought to have landed at Richborough and quickly succeeded in establishing itself across the friendly tribal lands of south-eastern Britain. But John Manley and others have raised questions about both the account and its interpretation, suggesting instead that the landing was further west in the Solent of east Hampshire and west Sussex, a view supported and amplified by John Hind's detailed work on placenames and topography in relation to Dio's account. What seems clear, however, is that a primary target of the invasion force was the Catuvellaunian brothers Togodumnus and Caratacus who were routed and eliminated by Plautius's legions, allowing safe passage for the Emperor Claudius himself to lead an army to *Camulodunum* in the summer



of AD 43. Here Claudius received the surrender of 12 kings effectively representing the tribal lands of peoples in the Core Zone and most of the Periphery Zone.

### ***Campaigns in the west and north***

The Conquest was far from over when Claudius left. By about AD 47 a frontier zone running south-west to north-east, from Exeter to the Humber Estuary, had been established, but even getting to this point had been hard as some tribes within the Periphery Zone put up fierce resistance. The historian Suetonius relates that Vespasian, the leader of II Augusta and responsible for taking the Durotrigian area in Dorset and Somerset, had to take the main hillforts one at a time. Local people were prepared. At Hod Hill, Dorset, for example, an extra ditch was being excavated and cupboards had been built into the walls of the roundhouses perhaps to conceal weapons ready for immediate use by the inhabitants. The superior fighting strength and military equipment of the Roman army prevailed, and all these forts and many more were taken. At Maiden Castle, Dorset, excavations by Sir Mortimer Wheeler revealed what he interpreted as the results of the attack and sacking of the fort, although more recent excavations cast some elements of this in doubt. The supposed 'war cemetery' in the east entrance had been used for decades before the Roman invasion, but may have received a few casualties from the Conquest period. Moreover, not all the hillforts in the south-west were taken by force at this time. At Cadbury Castle, Somerset, for example, the fort was not assaulted until about AD 60, and it may be that the events which occasioned this purge of native hillforts were bound up in the British revolts between AD 60 and AD 65 of which the most well-known are those led by Boudicca of the Iceni in East Anglia.

Forts, fortresses, supply bases, new roads, bridges, and all the usual infrastructure associated with a military invasion spread across the countryside as the army consolidated its gains. Pockets of resistance undoubtedly existed and attacks on convoys and camps must have taken place, the plunder from such raids supplementing earlier traded supplies of luxury goods. Research by Malcolm Todd has suggested that in south-western England at least some hillforts were used by the Roman army as camps, thus securing key points. At Hembury, Devon, for example, the military occupation seems to have included the construction of timber buildings including workshops around AD 55. At Cadbury Castle, Somerset, four phases of refurbishment can be seen in the gateway after AD 60, and timber barracks were built inside the fort.

After AD 47 the Roman army pushed westward and northward into Wales, and parts of the south-west peninsula, probably in a quest to secure access to minerals and metals rather than territory. Excavations by Stan Stanford at the Wrekin, Shropshire, suggest that the hillfort on this prominent landmark was probably destroyed about AD 48–50 when the gate and internal buildings were burnt, and never rebuilt. Other hillforts in the Marches had been abandoned earlier, as in southern England, and it is not at present clear how many hillforts were occupied at the time of the Roman Conquest.

The northern frontier was always a problem for the Roman army. The Brigantes who occupied a very large tract of Yorkshire and northern England had probably been one of the 12 tribes to surrender to Claudius in AD 43; certainly they were supporters of Rome during the early years of the Conquest. This seems to have changed in AD 69 when Queen Cartimandua lost control of the tribe to Ventius, who had turned against Rome. In AD 71–4 a series of campaigns effectively returned control of the area to Rome. One of the main settlements in the territory of the Brigantes was Stanwick, North Yorkshire, a nucleated settlement of considerable size which in its final phase was refortified against the Romans with additional dyke systems, presumably to protect the occupants and their stock. Preparations had been made elsewhere in northern England too. At South Cave, East Riding of Yorkshire, for example, in the heartland of Parisi territory weapons seem to have been stashed, including five swords in scabbards and 33 iron Roman-style pilum heads sometime after AD 50.

According to Roman Imperial policy, the far north was never fully taken although campaigns were launched into Scotland. For all practical purposes the frontier lay in the Tyne-Forth province. These western and northern areas naturally provided refuges for anti-Roman agitators, and probably always provided a source of trouble and constant worry to the Roman authorities.

Classical writers present a rather glossy picture of a well-coordinated invasion and subjugation of Britain accompanied by some, but not insurmountable, resistance. This is what might be expected from such writers, but the reality may have been rather different. The fact that large parts of Britain were never fully taken, and that a strong military presence was maintained throughout the Roman period, hints that things may have been more difficult than commonly portrayed. For those living in the Core Zone the coming of Rome was probably the culmination of a series of processes stretching back a century or more, and for those in appropriate positions in society all the benefits of the Roman world were suddenly available. In parts of the Periphery Zone and the Outer Zone, where direct contact with the Roman world had been slight, the invasion was perhaps seen quite differently.

In contrast to the Norman Conquest of 1066, the Roman Conquest was a long drawn out affair. Differences in social organization between the two periods partly explains this, but sustained resistance must also have had a part to play. If we look for modern analogies to the Roman Conquest of Britain, the abortive Russian invasion of Afghanistan in 1979, the US-led invasion of Afghanistan in 2001, and the Anglo-American invasion of Iraq in 2003 provide interesting models of indigenous tribal systems being pressured through military action to adopt alternative political systems. In all these cases certain sectors of society were sympathetic to the invasion, but others favoured traditional arrangements and gave fierce resistance, particularly in the uplands and marginal lands away from the main centres of population. In the case of Romanizing forces in Britain, for example, Tacitus (*Agricola* 18) records that in about AD 77 the Ordovices living at this time in mid Wales wiped out an entire squadron of cavalry who were on patrol in their territory.

## AFTER THE CONQUEST

The initial impact of the Conquest varied from one region to the next. As already emphasized, the military take-over was neither rapid nor complete. Those who survived the Conquest learned to live under their changed circumstances over a generation or so.

In the north and west there was widespread continuity among small-scale homestead-based communities, and the familiar established pattern of raths, rounds, multiple-enclosures, duns, brochs, and crannogs which had served successive generations for many centuries continued to be inhabited and new examples built. The uplands were used by the Romans as a source of raw materials, especially minerals, and also as a training ground for the army. Some sectors of the north and west became military zones, and the army was seemingly in control of the exploitation of many natural resources through into the third or fourth century AD. But in a sense their presence was little more than an interlude within a traditional way of life that continued through into the later first millennium AD and beyond in some places.

In southern and eastern England the impact of the invasion was greatest. The high-order settlements of the Core Zone and Periphery Zone quickly became regional capitals of territorial units known as *civitates* in a political landscape that respected former traditions while opening up new possibilities for trade, commerce, and styles of government. John Crighton has shown that within the Iceni territory local coins were gradually replaced by Roman currency in a relatively smooth transition. Sometimes regional capitals were constructed directly over the pre-existing oppida, as at Winchester (*Venta Belgarum*) and Leicester (*Ratae Coritanorum*). Elsewhere, the centre of activity moved to more convenient locations, as for example from Bagendon to Cirencester (*Corinium Dobunnorum*) and Maiden Castle to Dorchester (*Durnonovaria*).

Within each *civitas* there were sub-units each known as a *pagus* (the inhabitants of a *pagus* were *pagani*, ‘country-dwellers’, whence the term ‘pagan’) many of which must have been based on the holdings of lower-order settlements established in the later first millennium BC. Three broad patterns to the development of these can be seen. Most carried on very much as before: farmsteads or hamlets set among their fields and enclosures worked on a collective basis by kinship units. This is certainly represented, for example, at Old Down Farm, Barksbury and Houghton Down, Hampshire; Frocester, Gloucestershire; Gamston, Nottinghamshire; Barcombe near Lewis, East Sussex; and countless other sites across south-eastern Britain. At Heybridge, Essex, occupation sites, fieldsystems, religious enclosures, and industrial areas involved in making pottery all carry on more or less unchanged through the first and early second centuries AD. In some cases roundhouses were replaced by rectangular aisled houses during the later first or early second centuries AD, and a few later went on to have impressive stone-built villas in the later second, third, or fourth centuries AD.

Others settlements were completely changed soon after the Conquest, some possibly through military intervention, for the creation of new infrastructure to support the economic imperatives of joining the Roman Empire. One such site examined by the Oxfordshire Archaeological Unit is

Claydon Pike, Gloucestershire. Here it appears that a small traditional hamlet set within open grassland and probably closely involved with horse-rearing continued in occupation until about AD 70, when suddenly everything was changed. Both the settlement and the surrounding landscape were reorganized with regular roads and enclosures to form what David Miles once speculated was a settlement connected with local tax collection. An open area was constructed for the assembly of goods while an enclosure on the east side was entered through a substantial gate with a tower above. At Watkins Farm, Northmoor, Oxfordshire, there appears to be a break in the occupation sequence from about the time of the Conquest through to the late first century AD.

The third course of events was for a site to become Romanized through the creation of an estate that was socially and physically organized around a prestigious dwelling or villa occupied by a member of the established or newly created elite who would probably have formed the *decuriones* in the *curia* or council that managed each *civitas*. Miles Russell has argued that the great palace at Fishbourne, West Sussex, was built around AD 90 as a residence for Gaius Sallustius Luccullus, who was a local prince who gained Roman citizenship and may for a while have been Governor of Britain. Certainly the scale of the palace and its grandeur would have been an appropriate reward. Elsewhere the scale was more modest. At Park Street, Lockleys, and Turners Hall Farm, all in Hertfordshire, farmsteads were rapidly converted to Roman villas in classical style, starting as relatively simple rectangular structures but quickly becoming increasingly sophisticated later through additions and modifications. At Piddington, Northamptonshire, a wooden proto-villa was constructed before AD 100 while at Blacklands near Frome, Somerset, a small villa was built about AD 70 when all the settlements round about still comprised traditional roundhouses. Similarly at Ditches, Gloucestershire, a simple stone villa with more than a dozen rooms and a cellar in distinctive Roman style was built around AD 70 within an existing high-status enclosure settlement forming part of the Bagendon complex. Whether these villas and others like them were the homes of Roman immigrants who accompanied the invasion or whether they were those of important Britons given special status as a reward for supporting the Roman mission is rarely clear, but both cases are likely. Gloucester (*Glevum*), Lincoln (*Lindum*), and Colchester (*Camulodunum*) were established as *colonia* to receive Roman citizens and legionary veterans who governed themselves according to a constitution modelled on that of Rome itself. In doing so they acted as beacons for Roman culture.

In towns and in the countryside, existing shrines and sacred places continued to be used after the Conquest. Some, such as West Hill, Gloucestershire, and Bath, Bath and North East Somerset, were rebuilt in more classical style. The Druids were not allowed to flourish, and Roman gods were assimilated with their Celtic counterparts.

By the end of the first century AD much of the south of Britain was caught up in a society altogether different from that of prehistoric times. Different patterns of trade and commerce, a market economy, new ritual arrangements, and a new system of government set the scene for a new era in the history of Britain.

# 9

## LET IT BE

### Patterns of society and change

In prehistory, as today, nothing lasts for ever. All things change through time, and human societies in particular continually adapt to fluctuating circumstances, adopt new forms and new patterns of organization, create new beliefs, and re-make the places that are important to them. Reconstructing prehistory is often likened to piecing together a jigsaw puzzle. But a jigsaw puzzle represents an altogether too static view of the past. Communities came and went, the focus of action shifted from one area to another, and success was periodically tempered by failure and tragedy. A more apt analogy would be piecing together lengths of a movie film with various portions missing and many poorly focused frames.

Change is inevitable, but its rate has not been constant through the 600,000 years or so that people have occupied Britain. Long periods of very gradual change can be detected, in some cases so slow that the societies in question might almost be described as stagnant. The most clear-cut example concerns the hunter-gatherer communities living in Britain during the later part of the Pleistocene. For over half a million years their material culture – their tools, ornaments and possessions – underwent the most minimal modification. Looking back, it is hard to believe that the handaxe was the principal stone tool for so long. Closer to us in time are the Atlantic seaboard communities of the second and first millennia BC. These groups also changed relatively little compared with contemporary communities elsewhere in Britain, maintaining small homesteads focused on roundhouses for more than a thousand years.

In contrast, there were also episodes of rapid change. The earliest easily recognizable such period is around 4000 BC, shortly after the introduction of gardener-farming to Britain. At that time new burial rites, settlement patterns, and forms of economic organization were adopted within a matter of just a few centuries. Thereafter several other periods of rapid change can be identified, the next about 2400 BC, then about 1500 BC, and again, in some areas at least,

immediately prior to the Roman Conquest. There can be little doubt that for those living during these periods life was especially traumatic.

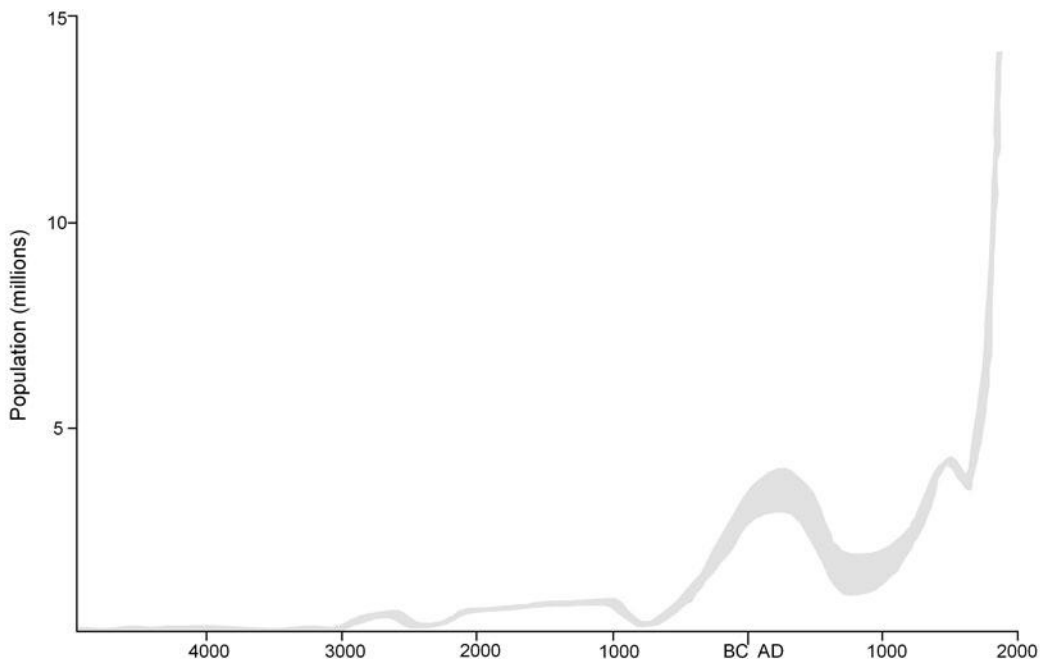
Against this background of differing rates of social change stands the question of the direction of change. Looking back from our own standpoint within a complex twenty-first century AD western society, the last 600,000 years of human endeavour may seem like a long uphill struggle towards what we might regard as ‘civilization’. However, closer scrutiny of the course, or trajectory, of that development suggests that it was far from continually uphill. The definition of ‘development’ is fraught with difficulties, but if we take it to mean an increase in technological, economic, and social sophistication, it is clear that while periods of advance can certainly be identified, there were also periods of retreat or decline. Early examples include the gaps in settlement during the Pleistocene, but even since 10,000 BC setbacks can be identified and they seem to form part of a roughly cyclical pattern of advance and retreat. The apparent abandonment of traditional monuments, the regeneration of forest clearances, and a decline of crafts such as potting and flintworking about 3300 BC was, in some areas, the first major setback. Rather later, about 1000 BC, the abandonment of the uplands which had previously been extensively, and locally intensively, settled must also have represented a setback. This last example illustrates a further important feature of prehistoric social change: it is markedly regional or localized in its effect. Prehistoric societies were not so much ‘primitive’ in the sense of being backward or uncultured, but simply small-scale in their organization and operation. Because of this, patterns of change need to be analysed at appropriate scales.

Viewpoint is an important consideration when scaling and understanding change. The detached perspective offered by archaeology allows different viewpoints to be explored more or less simultaneously, both socially and geographically. How might changes such as the adoption of gardener-farming differentially affect the life of a woman, a man, a child, a mother, a grandfather, or a disabled person, for example? Did they all think that biologically manipulating the life cycles of plants and animals was a good thing? Did they care? Or did some think the old ways were best? Following the maxim attributed to Winston Churchill that ‘history is written by the victors’, prehistory is often written from the perspective of the innovators and those at the cutting edge of new developments. But here there are other perspectives too. Hugh Brody, for example, questions the view that farmers triumphed over hunter-gatherers; challenging the stereotypes, he suggests instead that hunter-gatherers are the ultimate stable, sustainable, settled communities deeply rooted to their land. Viewed over the long term, farmers have nomadic, precarious, and fragile lifestyles with relatively limited attachments to the land. At the other end of prehistory, there are equally diverse perspectives to be developed on relationships between communities living in different parts of Britain and the mighty Roman Empire.

Particular causes of changes visible at different times in prehistory have been touched upon in Chapters 2 to 8 above, at least as far as present archaeological evidence allows. No single factor or prime mover – for example invasions, migrations, or population increases – can be, or indeed should be, invoked as a universal explanation for change. Detailed studies of prehistoric societies have time and again emphasized how numerous factors contribute to social change, and each

period needs to be examined closely before hypotheses are presented. Three general points can, however, be made. First, most social change results from a combination of internal and external factors or influences. Which triggers the other in any given case is a matter for research and investigation. Second, it is notable that change is slowest where opportunities for the combination of internal and external influences are minimal. This might rather flippantly be termed plain old conservatism, but it remains a fact that isolation and autonomy promote stability. In the case of hunter-gatherers, low population densities dictated social isolation, while the Atlantic seaboard communities of later prehistory were geographically isolated by the very nature of the landscape in which they lived. Third, looking at the whole continuum of prehistory, the intervals between phases of decline have become shorter and the growth in periods of expansion more rapid, and this can be seen fairly clearly in population estimates (126). This appears to be something which has continued into historic and indeed recent times.

Causation is a difficult matter to deal with in the deep past, just as it is now. Take the case of climate change. The climate is constantly changing, and as far as we can tell will continue to do so at different speeds. Relative sea levels rise and fall at alarming rates when looked at through the conflated perspective of time-depth; only 9,000 years ago there was no English Channel or North Sea separating Britain from the Continent. Whether human impacts on the environment through



**Figure 126** A possible population curve for Britain 5000 BC to AD 1801. A ‘band of possibility’ is used to suggest maximum and minimum likely levels on the basis of the evidence recorded to date. [After Fowler 1978, fig. 1 with various modifications]

increased gas emissions either in the past or in recent times have had any real effect on deep-seated long-term patterns of climate change remains to be seen. No doubt a cleaner planet would be a better planet for all who live on it, but there is a danger that apparent autocorrelations between the level of 'greenhouse' gas emissions and measures of climate change are mistakenly interpreted as a causal relationship when in fact the issues are far more complicated and long term.

Looking back into prehistory, it is notable that whatever the causes of observable changes might be there are always two big consequences. The first is that human communities are incredibly adaptable and quick to alter their ways of doing things in order to cope with changing circumstances. The second is that change always has consequences that have a knock-on effect for succeeding generations; a social, economic and environmental legacy for both immediate successors and distant descendants to cope with.

## PREHISTORIC INHERITANCE

Conditions of the natural environment play a major part in shaping the development of human societies. During the later Pleistocene the effects of glacial advances and retreats on the environment and on settlement and hunting patterns are clear enough. Later, climate influenced the distribution of farming, apparently allowing cultivation at higher altitudes in the warmer, drier periods of the second millennium BC, for example, and later being at least partly responsible for the abandonment of many upland areas. But also relevant to the form of any society is its inheritance from earlier generations – in other words, its setting, context, and history. This is most marked among small-scale societies, although still important for more complex societies too.

The single most influential feature to be inherited is the humanly modified environment: the vegetation cover, soil conditions, animal populations, and land use patterns determined by earlier generations. Examples from prehistory that illustrate the effects of this legacy are numerous. Clearings in the post-glacial climax forest cover made by sixth and fifth millennia BC hunter-gatherers provided the spaces in which early gardener-hunter communities were first able to cultivate land. Later, areas of cleared land allowed large monuments and enclosures to be built. In the uplands, landscape clearance in the early second millennium BC allowed a major episode of land apportionment about 1500 BC. Over-exploitation of agricultural land in the later second millennium BC had its consequences as the potential for rapid settlement expansion was restricted by the distribution of productive soils.

Other major inherited determinants of social development include social structure, technology, and ritual. Less archaeologically visible features will include populations, languages, ideologies, and political organization. Remote as prehistoric times may sometimes seem, the legacy of our prehistoric ancestors still influences our everyday lives, and we are still adapting to circumstances created several millennia ago. Naturally, it is sometimes difficult to trace things back into the remote past; appropriate records simply do not exist. But there are some features of the twenty-first century AD that can be traced to very ancient roots.



## ***People***

Modern genetic studies suggest that Britain's indigenous population with a local ancestry extending back more than three generations physically share a great deal with their prehistoric forbears: prehistory is quite literally in their blood. Certainly there is much more to be learnt about rates of change and the sources of particular sections of our genetic material, but existing analyses suggest that around 50 per cent of Britain's gene pool was present on the island by about 5000 BC, with major sources to the south-west in Iberia and to the east in northern Europe. A further 22 per cent can be attributed to population movements during the fourth millennium BC, with further major contributions from the same two source areas as well as the Rhineland and northern France. The remaining 28 per cent or so derives from population movements – including Germanic, Frisian, Roman, Saxon, Anglian, Norse, and Norman migrants – from the third millennium BC down to recent times. The geographical disposition of the descendants of these populations owes much to the original settlement areas, tempered by internal migrations and natural movements through marriage and economic necessity.

## ***Landscape and environment***

The appearance of the landscape and the humanly made environment of Britain owes much to the activities of prehistoric people, especially in the more remote areas less damaged by modern development. As emphasized in Chapter 1, and illustrated in Chapters 2 to 8, upstanding traces of prehistory abound in Britain as barrows, camps, forts, standing stones, stone circles, and so on. For every site visible on the surface there is another score hidden or lost from view. All in some way influence, or once influenced, local topography and landscape. It is salutary to remember that, no matter how remote a piece of landscape appears today, many people will have passed that way before, and indeed some of our most remote areas such as Dartmoor or the Lake District were once the focus of intensive occupation and exploitation.

Present day land use is also affected by our inheritance from prehistoric communities. Much of Britain's open aspect results from clearances wrought by prehistoric farmers. More influential still is the prehistoric over-exploitation of some areas causing soil exhaustion and acidification. Research by Geoffrey Dimbleby showed that many of today's lowland heaths were usable agricultural lands in the early second millennium BC, but that cultivation and grazing between about 1500 BC and 800 BC turned them into relatively infertile areas which were further despoiled by the effects of the weather. The same applies to much of the uplands, for far from being natural untouched wildernesses they are largely areas decimated by second millennium BC farmers whose worst scars have healed and been smoothed over by the hand of nature during the past two or three millennia.

In a few areas the actual layout of the present-day landscape owes something to our prehistoric forbears. This is particularly well illustrated in West Penwith, Cornwall. Here, the attractive

farming landscape is not a modern development but the direct result of prehistoric land division. From about 600 BC the clearance of stones from the fields and intensive cultivation produced the characteristically large drystone walls and terraced fields that dominate the modern landscape. Field survey by Nicholas Johnson in the parish of Zennor has shown that 80 per cent of existing field boundaries originated in prehistoric times, and the same undoubtedly applies to many other parts of the area. Similar patterns may be seen elsewhere, for example on Dartmoor and the Pennines, often most clearly demonstrated where modern farmland meets unenclosed land and the modern boundaries can be seen continuing into the heathland or moor as prehistoric field walls. But it is not only in remote areas. In the upper Thames Valley excavations in 1999 showed that a 200m section of boundary between the parishes of Ashton Keynes and Somerford Keynes follows exactly an earlier boundary ditch and a pit alignment established during the second millennium BC and constantly maintained through the millennia. We still live in the spaces thrashed out and marked by our prehistoric ancestors.

Continuity in the significance of a place at different times in prehistory and through into more recent times is sometimes reflected in the nature of the archaeological remains. Long barrows and passage graves built in the fourth and third millennia BC continued to attract attention through the second and first millennia, and in some areas may have provided the focus for reinvented traditions in the early first millennium AD. Indeed, the stone monuments of prehistoric origins, and presumably the lingering beliefs that went with them, were considered such a threat to the early Christian church that in AD 452 the Lateran Council forbade the worship of stones, a ban repeated by Theodore (AD 602–90), the seventh Archbishop of Canterbury, and included by his disciples in a collection of rulings known as the *Penitential*. It was a move that did not stop everyone, however, and at Forteviot, Perth and Kinross, the great Pictish royal centre was built on the site of a prehistoric ceremonial centre. Excavations in 2009 revealed a rich burial of the early second millennium BC which Stephen Driscoll suggests provides strong evidence for the presence of ancestral graves that were regarded as the resting places of mythological heroes by Pictish communities who themselves then buried their leader, Kenneth MacAlpine, nearby in AD 858. Elsewhere in Britain, Stephen Yeates has argued, the Dobunni tribe of the later first millennium BC, occupying what is now Gloucestershire and surrounding areas, continued through the Roman interlude, to emerge as the Hwicce in early historical times. Connecting the two was the common veneration of a goddess whose principal attribute was a sacred vessel which, he argues, is known as a *hwicce*, the root of the Old English word *wicce*, which refers to a person taking part in witchcraft.

## **Crafts**

Some crafts and technologies still common today have a direct and unbroken line of descent from the prehistoric period (127). The art of building drystone walls carries on today, using techniques identical to those used more than 5,000 years ago. Likewise, basket-making, weaving, and hurdle-making have changed little since at least the third millennium BC. Even the splitting and

A



B



**Figure 127** Ancient crafts still practised today. A: Wooden hurdles made of coppiced hazel and dating to about 2300 BC from Walton Heath, Somerset. B: Drystone walling in Cotswold limestone revealed in the forecourt area of the chambered tomb at Hazleton North, Gloucestershire, probably built about 3800 BC. Behind the wall is the rubble of the cairn which was constructed in a series of bays arranged parallel to a central spine/axis which can be seen as a ridge of pitched stone. Horizontal scale totals 2m. [Photographs courtesy of (A) John Coles (Somerset Levels Project) and (B) Alan Saville. Copyright reserved]

cleaving of timber, the cutting of mortise and tenon joints, and the hafting of tools has a history stretching back into prehistoric times. In metalworking, too, there are very few techniques in use today that were not developed to a high standard of proficiency during prehistory. The list could go on – archery, fishing, boat-building, woodland management, and more could all be expanded. The point is that basic crafts and skills such as these originated in prehistoric times, and while their contribution to the economy may have decreased recently, they still form a strong link with the past and represent a valuable heritage of knowledge and experience.

### ***Language and place names***

If we listen carefully we can still hear the sounds of prehistory echoing through our language and the voices of today. Although little is known in detail about the languages spoken in prehistory because of the absence of literacy, much can be gleaned from the analysis of place names which are typically perpetuated through oral tradition before being written down. Moreover, research by Colin Renfrew, Stephen Oppenheimer, and others reveals a good correspondence between the distribution and movement of language families in relation to genetic groupings. In broad terms the known early languages of Britain all derive from the proto-Indo-European language family, but by the time of the Roman invasion there were probably two or three main languages together with numerous local dialects and variations being voiced across the country.

In northern and western parts of Britain, Celtic languages, the roots of which lead back into Iberia more than 6,000 years earlier, were spoken. They survive today as a Brythonic branch represented by Cornish and Welsh, and a Goidelic branch formed of Manx and Gaelic. Prominent among the survivals are the topographic names, since these are resilient to change: among them *abona*, meaning ‘river’, which is preserved in the Welsh *afon* and the Cornish *avon* that are still found in Devon, Hampshire, Wiltshire, Warwickshire, and Stirling. Naturally, the spelling and phonetics of these names have changed a little through later developments, but the roots are still visible. The name of Britain’s second longest river, the River Thames, probably derives from the word *Tamessa*, based on the root *ta* meaning ‘to flow’, while the name of the longest river, the River Severn (Welsh: *Afon Hafren*), is thought to derive from the goddess *Sabrina*. Familiar words such as *tor*, *dŷn*, and *pen*, meaning ‘hill’, *carn* meaning ‘rock’, and *nant* meaning ‘valley’, also derive from this substratum of Celtic language.

In the east of Britain, Celtic languages were probably spoken alongside Germanic languages whose roots lay across the North Sea. They were essentially variants of what is referred to as Old English, which together with later contributions from Latin, Norse, and French have come down to us as modern English. How far back into prehistory the use of this Germanic language in Britain can be pushed remains problematic, although it is tempting to link its arrival with the spread of farming traditions originating in the Rhineland in the fourth millennium BC. Winn Scutt has assembled a considerable list of place names first recorded in Latinized forms in Roman

times but which are based upon words that can be traced back through Old English to their later prehistoric (i.e. pre-Roman) roots, for example the *Bibroci* tribe mentioned by Caesar, who lived in Kent and whose name means ‘the place by the brook’; *Clausentium* (Southampton, Hampshire), which translates as ‘the sandy place on the fork of the river’, which it is; and *Epeacum* (Whitley Castle, Northumberland), meaning ‘a raised place or look-out’. The Roman name for modern London, *Londinium*, might also be based on the pre-Roman usage of a Germanic word. Scutt also notes the existence of a former lake near Cricklade in the upper Thames Valley, whose existence is reflected in a series of place names derived from Old English relating to islands (e.g. Oaksey, Eisey, and Minety), headlands (e.g. Stert), and fords (e.g. Somerford). Archaeological excavations connected with the improvement of the A419 across the area in the early 1990s revealed physical evidence of the lake, with seeds from the basal fill providing a radiocarbon date of 1380–980 BC (NZA-9119: 2943±63 BP). The work also confirmed that in Roman times the lake was dry, was crossed by Ermine Street between Wanborough and Cirencester, and its surface criss-crossed by the drainage ditches of a fieldsystem. Thus if the lake is pre-Roman and the place names refer to features that did not survive into later times, it seems reasonable to assume that the vocabulary behind the place names relates to a language spoken in this part of Britain in later prehistoric times.

Latin and perhaps Greek were also spoken by sections of the population in the last few centuries BC in south-eastern Britain, and one might expect that coastal communities engaged in overseas trade would have a smattering of other languages spoken along Europe’s Atlantic coastline.

### ***Customs, traditions, and a sense of the past***

Some customs and traditions still upheld in Britain also have prehistoric ancestry. The calendar of 12 months used today was a Roman invention, and probably bears little or no relation to calendars used during prehistoric times. However, Alexander Thom, working from regularly occurring alignments in stone circles matched against the declination of the sun at different times of the year, proposed that prehistoric people divided their year into 16 equal periods. Aubrey Burl suggests that this quite brilliant piece of deduction by Thom might be a slight over-refinement of a simple calendar, and that if, instead, alternate months are used, the declinations correspond very closely to those of the four known Celtic festivals together with the solstices and the equinoxes. The important point here is that, whatever the basis for these eight festivals, most of them seem to have become transliterated into the modern calendar through being adopted as Christian festivals when the early church leaders appropriated pagan customs. In some cases the themes of these pagan, and putatively prehistoric, festivals are perpetuated in their modern counterparts – All Souls Day, for example, is celebrated at the same time as the Celtic festival of the dead known as Samain (Table J). Indeed, it is also tempting to speculate that rituals such as the horn-dance still carried on at Abbots Bromley, Staffordshire, and known

**Table J.** Traditional festivals and their modern counterparts. [After Burl 1983, 34 and Sermon 2001 with additions]

| Festival        | Festivities                                                                                                                                                                                                   | Approximate date<br>(modern calendar) | Modern equivalent                                                    |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------|
| <i>Beltane</i>  | Festival of optimism symbolized by the lighting of fires through which animals were driven as a purification rite. End of Spring (Anglo Saxon: <i>Lengten</i> )/start of Summer (Anglo Saxon: <i>Sumor</i> ). | 1–5 May                               | Whitsun/May Day                                                      |
| Summer Solstice | (Anglo Saxon: <i>Middansumor</i> )                                                                                                                                                                            | 21–22 June                            | Midsummer                                                            |
| <i>Lughnasa</i> | Festival of the god Lugh, with emphasis on stock-rearing, the harvesting of crops, and visits to high places. End of Summer/start of Autumn (Anglo Saxon: <i>Hærfest</i> ).                                   | 1–9 August                            | Lammas                                                               |
| Autumn Equinox  | (Anglo Saxon: <i>Efníht</i> )                                                                                                                                                                                 | 22–23 September                       | Harvest Festival                                                     |
| <i>Samain</i> * | Festival of the dead when people from the spirit world become visible to people on earth. End of Autumn/start of Winter (Anglo Saxon: <i>Winter</i> ).                                                        | 1–6 November                          | All Soul's/All Saint's/<br>Martinmas/<br>Halloween/<br>Bonfire Night |
| Winter Solstice | (Anglo Saxon: <i>Middanwinter</i> )                                                                                                                                                                           | 21–22 December                        | Midwinter/<br>Christmas/Yule                                         |
| <i>Imbolc</i>   | Fertility rituals traditionally associated with the lactation of ewes. End of Winter/start of Spring.                                                                                                         | 1–5 February                          | St Brigid's/<br>Candlemas/Lent                                       |
| Vernal Equinox  | (Anglo Saxon: <i>Efníht</i> )                                                                                                                                                                                 | 21–22 March                           | Easter                                                               |

\* Beginning of the Celtic year at which time any barriers between people and the supernatural are lowered

to have been part of midwinter celebrations before the Civil War, may have roots in prehistoric festivities.

Peripheral to modern life as these various carry-overs from prehistory may seem, their very persistence emphasizes the debt our society owes to its forbears and recognizes a widely held sense of the past. Natural human curiosity to know more about the past may provide the rationale for further investigations of prehistory, possibly as part of the current trend to find out more about everything and anything. But prehistoric archaeology is more than simply an academic study: it also has a contribution to make towards the science of society in general.

## **PREHISTORY FOR TODAY**

The value of prehistoric studies in the social sciences has long been recognized, and indeed often exploited, as in the writings of the archaeologist Gordon Childe, the sociologist Talcott Parsons, and the economist Karl Marx, to name but three. In most cases, however, the prehistoric past has been used to provide a prelude to general discussions of the development of complex societies, or as an historical introduction to the analysis of some contemporary phenomenon. Until recently, prehistoric studies as a section of the social sciences proper have not received the attention they deserve, despite the fact that for over 200 years prehistorians have been collecting and synthesizing information about the development of human societies. Before touching on what has been, and what might be, achieved as a contribution to the science of society, it may be helpful to recap briefly the main characteristics of prehistory relevant to such studies.

### ***Prehistory as sociology***

The greatest strength of prehistory as a social science is the tremendous time-depth offered. In Britain alone evidence is available for over 10,000 years of continuous social development. Within this period there is such great diversity of social complexity and environmental circumstance that no planned sociological study could ever hope to replicate it.

The price that has to be paid for such a rich perspective is that the evidence available is of a type unfamiliar to most social scientists working with contemporary cultures, and not susceptible to their usual methods of analysis. Archaeological evidence basically comprises material culture (artefacts, ecofacts – bones, pollen, structures, and so on – and their relationships to each other in time and space). By inference, relationships between material culture and human behavioural and psychological processes can be suggested. In the 1950s and early 1960s the obvious limitations of this for understanding the full range of human activities led to the development of a rather despondent attitude towards the potential of archaeological evidence – a view that is sadly still reflected in many museum displays. More recently, however, and prompted in this country

largely by the work of David Clarke, Colin Renfrew, Ian Hodder and others, it has become clear that such a view is ill-founded, and that objects do after all have much to tell about societies as working entities in prehistory.

Three distinct but interrelated levels of inference may be derived from the analysis of prehistoric objects. At the most basic there are functional considerations – the fact that axes can be linked with woodworking, pottery with cooking, specific buildings with habitations, ramparts with defence, and so on, according to traces of wear, use, and association. Second, something may be said about the way that objects were used as an extension of language to project and communicate information and ideas: a key form of non-verbal communication. The scale of the object will largely determine the level of communication: for example, a finger-ring may communicate status but only to those close enough to see it, while the defences of a hillfort may similarly communicate individual or group status but to a much wider audience. The design and ornamentation of objects may communicate group identity, and the distribution of such pieces may define the territory of that group if that was how the symbols were used. Thirdly, the context of objects and their associations are important because they were selected by their owners/users as being somehow meaningful and significant to the extent that sets of objects in certain arrangements or deposited in certain ways may reflect particular mental processes, associations of ideas, ideological statements about the user or perpetrator, and cosmological statements about the perceived structure of the world and the universe beyond. To take an example from present-day culture, black leather jackets adorned with studs and chains do not just imply affinity with a particular group of people who ride motor bikes and listen to distinctive kinds of music; they also imply affinity with particular attitudes towards violence, hygiene, sexuality, wealth, and property. The presence of weapons in male graves in the early second millennium BC, and also in the later first millennium BC, may similarly be linked not just to the function of the weapons themselves, but also to associations with a particular class of person with specific ideologies and attitudes which might not necessarily have been characteristic of society as a whole.

In developing the sociological aspects of Britain's prehistoric past, three distinct spheres of interest can be identified: the human condition, our own society, and other societies.

### ***The human condition***

Some consideration of the human condition as exemplified through the long time perspective of prehistory has already been touched upon in this and previous chapters. At the functional level, much has been made of the capacity of prehistoric societies to constantly adapt and readapt to changing circumstances. Survival and continuity are clearly illustrated in Britain's past, and it is consoling to see that, despite the fact that prehistoric communities had the capacity to destroy themselves, and each other, there are apparently no times when total extinction resulted. At another level, the ways that communities communicated ideas and expressed affinity is of interest. It must not be assumed that human societies always use the same devices to communication



identity and social order. Richard Bradley has shown that during prehistoric times ostentatious behaviour focused on the development of complexity in only one sector of everyday life at a time, and that different sectors were used as time went by. Among the early farming communities, settlements are elaborate and variable but burials follow set patterns and are ostensibly communal. Later, in the early second millennium BC, the reverse is true: burials show great variety and elaboration whereas settlements are very simple in form. The pattern is almost cyclical.

### ***Society today***

These general considerations lead towards understandings of our own society. At the most fundamental level, studies of prehistory contribute towards explaining the unknown and the mysterious. Providing a perspective for the appreciation of unfamiliar features in our landscape is as important as being able to say exactly how they were used. Naturally, this promotes a sense of belonging and a greater sense of history, which in turn contributes to the development of social attitudes ranging from local pride to national consciousness. Work by Ian Hodder has begun to take general lessons from prehistory still further, through developing the implications of individual and group identity and the structural significance of the use of material objects. One case study he develops derives from the observation that, at times of increasing stress, the identity and affinities of self-defining groups are projected more forcefully through imbuing material symbols with special meanings. It can be seen clearly enough in the proliferation of decorated pottery about 3300 BC, when traditional farming societies were under stress, and also rather later, when hillforts and enclosures sprang up across western Britain and a warrior class emerged. Why then, Hodder asks, were the clear warnings of stress displayed in the music, self-decoration, and material symbols of violence among youth sub-cultures at the focus of urban unrest during the early 1980s largely ignored?

### **LOOKING AT OTHERS**

Finally, it should be clear by now that looking into our own past is like looking into the future of other societies. After all, many different forms of social complexity can be matched in our own past. At the functional level, work such as that undertaken by Peter Reynolds at the Butser Hill Experimental Farm, Hampshire, provides valuable scientific information about the potentials and practicalities of the technology and subsistence practices of later prehistoric groups. These naturally have implications for the encouragement, or discouragement, of similar practices among small-scale contemporary societies. Beyond this are examples in our own past of the consequences and effects of specific actions – not just short-term effects but long-term too. Forest clearance and over-exploitation of marginal land are just such cases and have already been discussed in some detail. Relationships between complex societies and small-scale societies, the effects of trade

across such boundaries, and the implications for political and economic development are other important areas for study. After all, Britain's relationship to the Third World now is much the same as that between the Roman world and Britain only 2,000 years ago. Mention may also be made of the ways in which goods are consumed. From our own past, it is clear that periods of maximum innovation and technological development occurred when consumption and disposal of wealth peaked, for example at times when grave goods or ritual removed many objects from circulation and stimulated the production of replacements. Commensurately, when wealth (in the form of objects and equipment) is stored and accumulated, innovation is minimized.

Contributions to the present from prehistory will, of course, never provide straightforward solutions to current problems, but they can enrich the range of possible alternative courses of action, provide a more pragmatic basis for decision-making and, in the longer term, allow a more balanced approach to understanding the workings of societies and the relationships between and within them.

## PREHISTORY TOMORROW

It may at first sight seem perverse to finish a book on the ancient past with a look towards the future, but of course here lies the way forward for both the advancement of the discipline and the wider appreciation of prehistory as part of our heritage. We cannot simply let it be: prehistoric archaeology contributes to the future as well as to the here and now.

The single biggest problem facing prehistoric studies at present is the fact that the basic sources of information about the past are diminishing rapidly. We have a sample of what once was, but a fraction of what eventually will be. Industrial development, intensive agriculture, land drainage, mineral extraction, and urban expansion are now collectively erasing the evidence remaining from prehistory at a faster rate than ever before. A study of monuments at risk in England revealed that between 1945 and 1995 an average of one major known archaeological site had been destroyed per day, about 14 per cent of which were of prehistoric date. No figures are available for the loss of sites not recorded in the first place. Despite widespread interest in the ancient past, financial considerations so often get in the way of preserving essentially priceless sites and monuments. It would be wrong to think that everything must be saved at all costs, but a conscious effort must be made to save the best of what we have, for our own and future generations to study and enjoy.

Assuming that something remains to investigate, then academically the future looks bright. New discoveries, new excavations, and new research will no doubt generate new insights into the past; details which are now obscure will in due course be clarified, and gaps in existing knowledge will hopefully be filled. Experimental and technical studies will no doubt extend our understanding of what is found.

As a financial asset, the prehistoric heritage is already proving its worth as a significant component of the tourist and leisure industry. Income from such sources cannot easily be quantified

because, in addition to direct revenue, local economies are stimulated in an unquantifiable way, and visitor satisfaction and pleasure simply cannot be listed on a balance sheet. About a million visitors a year wander round Stonehenge, gaze at its rude stone structures, wonder at its purpose, and spend their money in the shops and nearby facilities. As an inspirational asset, the relics of prehistory frequently influence the work of artists, writers, poets, and musicians to find expression through many media in contemporary popular culture. As a social contribution, the developing interest in the sociology of prehistory must not be underestimated. If studies of prehistory can stimulate new attitudes to material things and social relations, then they will make a relevant contribution to the understanding of ourselves – past, present, and future.

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The following abbreviations have been used:

|        |                                                                      |
|--------|----------------------------------------------------------------------|
| BAR    | British Archaeological Reports                                       |
| CAA    | Cambrian Archaeological Association                                  |
| CBA    | Council for British Archaeology                                      |
| DoE    | Department of the Environment                                        |
| EJA    | <i>European Journal of Archaeology</i>                               |
| HBMCE  | Historic Buildings and Monuments Commission for England              |
| HMSO   | Her Majesty's Stationery Office                                      |
| MIAR   | McDonald Institute of Archaeological Research (Cambridge)            |
| OJA    | <i>Oxford Journal of Archaeology</i>                                 |
| OUCA   | Oxford University Committee for Archaeology                          |
| PPS    | <i>Proceedings of the Prehistoric Society</i>                        |
| PSAS   | <i>Proceedings of the Society of Antiquaries of Scotland</i>         |
| RCAHMS | Royal Commission on the Ancient and Historical Monuments of Scotland |
| RCHME  | Royal Commission on the Historical Monuments of England              |
| SAL    | Society of Antiquaries of London                                     |
| SAS    | Society of Antiquaries of Scotland                                   |
| USDAP  | University of Sheffield Department of Archaeology and Prehistory     |
| WANHM  | <i>Wiltshire Archaeological and Natural History Magazine</i>         |

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## CHAPTER 5: RISE UP LIKE THE SUN

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## CHAPTER 7: BROTHERS IN ARMS

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## CHAPTER 8: ON THE THRESHOLD OF A DREAM

Chapter 8 covers the period traditionally referred to as the late Iron Age, with a little overspill into the early Roman period. The following works include general treatments of the period 100 BC–AD 50:

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- Cunliffe, B and Rowley, T (eds), 1976, *Oppida in barbarian Europe*. Oxford: BAR International Series S11.
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 Rodwell, W, 1978, 'Buildings and settlements in south-east Britain in the late Iron Age' in B Cunliffe and T Rowley (eds), *Lowland Iron Age communities in Europe*. Oxford: BAR International Series S48, 25–42.

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- Cunliffe, B W, 1982, 'Britain, the Veneti and beyond'. *OJA* 1: 39–65.  
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